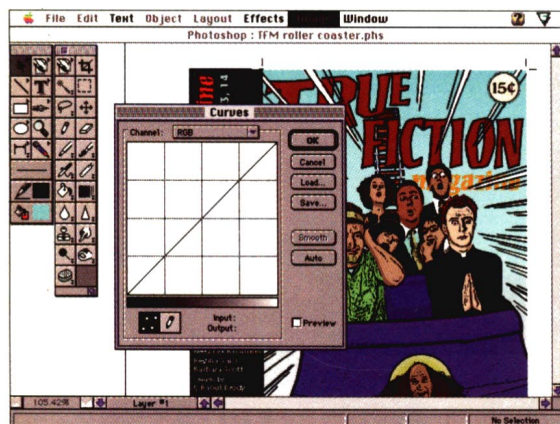




Bit-mapped images can be created or imported into Canvas 5 at near-Photoshop speed. Canvas provides a set of Photoshop-inspired tools and dialog boxes for editing bit maps.

BETA TEST

Canvas covers ground in sweeping upgrade

By Ben Long

Good news for Canvas users who've waited for Deneba Software to ship the long-promised Version 5.0: This release has the potential to put Canvas on equal footing with Adobe Illustrator and Macromedia FreeHand.

There's still some polishing to be done before Canvas 5 is re-

leased next month, for \$599, and we were unable to test Canvas' color-separation capabilities during our beta review. But so far, Deneba has made good on its claims for Canvas 5: The program has gone farther than any other in integrating painting, illustration and page-layout tools.

See Canvas, Page 70

IBM's Moccasin prototype runs WinNT, Mac OS

By David Morgenstern

PC Expo attendees were offered proof last week in New York that the forthcoming PowerPC Platform is not all smoke and mirrors. In a booth co-sponsored by the PowerPC partners — Apple, IBM Corp. and Motorola Inc. — a prototype hardware system started up both the Mac OS and Microsoft Windows NT.

Based on an IBM prototype, code-named Moccasin, the system ran a 133-MHz PowerPC 604 processor (see 11.27.95, Page 1). It used an Intel-standard PC keyboard and two-button mouse. Hitting the machine's On button presented users with a choice of operating systems as well as configuration options, such as adding another OS to the mix.

See PPCP, Page 68



Apple COO Landi puts profits first

Corporate plan is built for speed

By Rick LePage and David Morgenstern

Saying that "the glory is not in selling the Macintosh; the glory is in profit," new Apple Chief Operating Officer Marco Landi last week laid out his rules of order for returning Apple to stability and profitability.

Landi's remarks at PC Expo in New York described his expectations for Apple's current organization. Landi was appointed COO in May to implement the ambitious restructuring plan unveiled by CEO Gilbert Amelio at the Apple Worldwide Develop-

ers Conference in San Jose, Calif. (see 05.20.96, Page 1).

Under that plan, Apple reorganized into four main profit-and-loss centers under new leaders: Macintosh, Frederick Forsyth; Servers and Alternate Platforms, Howard Lee; Information Appliances, James Groff; and Imaging, which is being run by Maury Austin and Tom Mager while Landi searches for a new general manager (see story, Page 6). Claris Corp. of Santa Clara, Calif., headed by Guerrino DeLuca, remains an independent operating unit that also reports to Landi.

Under the new organization, the heads of each hardware division are responsible for everything

See Landi, Page 68

Macs run above the fold at Vegas newspaper show

By MacWEEK staff

In a demonstration of the continuing convergence of the paper-and-ink newspaper industry and desktop computer technology, a slew of Mac vendors turned out for Nexpo96 in Las Vegas last week.

Despite the more than 325 exhibitors filling the Las Vegas Convention Center, Nexpo was lightly attended.

"You go to Macworld or Sey-



bold or Graph Expo and the place is jammed," said Craig Cline, associate editor for Seybold publications in Foster City, Calif. "But you go to Nexpo and you could probably skateboard down the aisles without running into anyone."

Betsy Ashton, director of NewsView solutions at Lexis-Nexis, agreed that attendance was down but said attendees were better-

informed than in previous years. "There was less tire kicking," she said. "Clients knew what they wanted and what the software was capable of doing for them."

Cline said the lackluster turnout reflected the widespread adoption of desktop products, such as QuarkXPress. "Nowadays, everybody is using some variant of XPress and [QuarkXTensions] for producing pages," he said. "Except for those purpose-built solutions and technologies that are only applicable to the newspaper industry, you can get much of the basic building blocks at other shows."

Tom Porter, publisher of the Kinston (N.C.) Free Press, was at Nexpo to shop for Web tools and look at pagination systems. He may have found the former in FutureTense Inc.'s Texture, a Java-based Web editor he called "revolutionary." He was also taken with direct-to-press technology, which he saw for the first time.

See Nexpo, Page 67

CompuServe's Smart Rules gives lip service to e-mail

By James Staten

Members of CompuServe Inc.'s information service can now retrieve and reply to e-mail without a piece of equipment that used to be essential — a computer.

The nation's second-largest online service last week unveiled a new feature that uses text-to-speech technology to read e-mail to members over the phone. Both

Mac and Windows users can also have e-mail sent to their pagers or faxed anywhere in the world.

The new services, provided under the name Smart Rules, are offered through a joint venture with Premiere Technologies Inc., a telecommunications technology company based in Atlanta.

*See CompuServe, Page 70



Reach out and touch your e-mail: CompuServe now lets users forward their e-mail to pagers or retrieve messages over the phone.

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Step up to the monitor and be astounded. Custom configuration means the miroMotion DC20 video card can be pre-installed and shipped on any Power Computing system you order, unleashing true AV capabilities at prices that blow Apple out of the ocean.

The miroMOTION's professional quality S-Video editing boasts high resolution (640 x 480), at a frame capture rate of 30 frames per second (60 Fields Per Second) while delivering high-quality output.



(320 x 240) is just one-quarter of what you get from a Power Computing AV system. And lest we forget, the frame capture rate of Apple's AVs is a puny 25 frames per second, fine for flipbooks, but not for full-motion video.

As part of the fastest Mac OS™ systems on the market, the miroMOTION card runs as it's intended. For instance, complete post-production with non-linear editing allows you multiple edits with no loss of quality. You have the ability to digitize, compress and record studio quality right on your hard drive. And most importantly you can output the same quality to VHS, S-VHS, Video8 or Hi8 formats.



On the other hand, a Power Mac 8500, regarded by Apple as their flagship audio-video machine, gives you video output that leaves you feeling, well, quite underwhelmed (see above photos please). But that's not surprising when you consider the video output resolution on the Apple PowerMac 8500

And, since Adobe Premiere LE editing software comes bundled free on every Power Computing AV unit, you're ready to go right out of the box.



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AT DEADLINE

Reply ships Pentium cards based on Apple designs

Reply Corp. of San Jose, Calif., will begin shipping 100-MHz DOS-compatibility cards this week. Based on Apple designs, the PCI boards use Intel Pentium or Cyrix 5x86 CPUs and cost \$1,095 and \$795, respectively (see 06.17.96, Page 1). Unlike Apple's, these cards have 2 Mbytes of video RAM and three-year warranties. Reply plans to ship several value-added features for the cards in September, including multihoming networking add-ons for older PCI Macs and serial and parallel port options. The company said its main engineering focus is a Windows NT-ready 133-MHz Pentium card due in September for less than \$1,400. □

Iomega plans internal Zip drive for portables

Iomega Corp. last week demonstrated a smaller, internal Zip drive for portable computers. The drive on display was 15mm high and will ship in the first quarter of 1997, said Iomega President Kim Edwards at PC Expo in New York.

Engineers working on the drive said it will draw the same power as current portable CD-ROM drives. The mini-Zip works with the same 100-Mbyte media as desktop Zip drives, but one engineer said the forthcoming drive will use a completely new mechanical design: a new motor, smaller integrated circuitry and a different eject mechanism. Pricing has not been set.

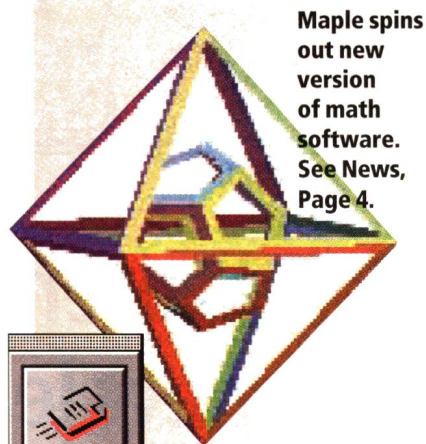
Edwards said the mini-Zip is the latest effort to "consumerize" Iomega's removable-media drive. The Roy, Utah-based company said it has no takers so far for the OEM device. He also said Iomega had a 200-Mbyte version of the desktop Zip in the labs. The ship date for the higher-capacity removable drive will be "determined by consumer demand and competitive reaction." □

V.34 Comm Slot modem from Global Village ships

Global Village Communication Inc. of Sunnyvale, Calif., is now shipping an internal 28.8-Kbps fax modem for the Communications Slot found in some Power Mac and Performa systems. The \$240 TelePort Platinum Comm Slot Edition, bundled with some Performa configurations, works with the Performa 5200 and 6200 series, as well as the Power Mac 5200/75 LC and 5300/100 LC. Global is also selling the TelePort Platinum Internet Edition, a \$240 bundle that includes a 28.8-Kbps fax modem and Netcomplete, a new Mac software bundle from Internet service provider Netcom On-line Communications Services Inc. of San Jose, Calif. □

To our readers

MacWEEK will not publish a print edition the week of July 1. Look for news updates online at www.macweek.com. □



Maple spins out new version of math software. See News, Page 4.



Push-button color management remains elusive. See GA Extra, Page 12.



VideoShare's simple interface allows video distribution over networks. See GA, Page 8.



OS fixes a gamble, but latest seem a good bet. See MacInTouch, Page 33.

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THE NEWS DAILY FOR THE MACINTOSH MARKET

The latest news online

Macs are sneaking in through the back door again, this time as Web-authoring systems for intranet-minded companies. Opinion Page Editor Mark Hall sees sense behind the summer rush of HTML editors. . . . Mac managers should unite, and they have nothing to lose but their chains, says Don Crabb. And he's got a poll to prove it. . . . Can Apple or third parties explain the disappointing Fast Ethernet tests? Look for their replies online.

MacWEEK Insider

Is the Mac networking glass half-full or half-empty? Carolyn Said, executive editor/reviews and features picks her way through a bramble of lab test results to evaluate Fast Ethernet and Open Transport 1.1. Apple delivered on promises of improved speed with the latest version of the Power Mac networking architecture, but Mac Fast Ethernet cards are still nowhere near as fast as 100BASE T on PCs (see story, Page 27).

Where to find us online

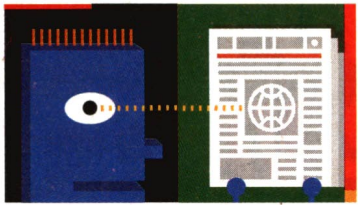
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THIS WEEK ONLINE

Fast Ethernet trouble
Apple, vendor responses
Web is Mac's fifth column
Steamed Crabb's poll



MacWEEK (ISSN 0892-8118) is published weekly, with the exception of Jan. 1, July 1, Sept. 2, and Dec. 23 and 30, by Ziff-Davis Publishing Co., 1 Park Ave., New York, N.Y. 10016. Single-copy price, including postage: \$6. One-year subscription rate: U.S., \$125; Canada/Mexico, U.S. \$225; International, U.S. \$350 (airmail). All orders must be prepaid. Direct subscription inquiries to Customer Service Department, MacWEEK, c/o JCI, P.O. Box 10634, Riverton, N.J. 08076-0634; (609) 786-8230. Changes of address require that a new application be filled out completely and include both new and old addresses. Allow four to six weeks for processing. We periodically make lists of our customers available to carefully screened mailers of quality goods and services. If you do not wish to receive such mailings, please let us know by writing to us at Customer Service Department, MacWEEK, P.O. Box 10634, Riverton, N.J. 08076-0634. Postmaster: Send address changes to MacWEEK, P.O. Box 10634, Riverton, N.J. 08076-0634. Periodicals postage paid at New York and additional mailing offices. Printed in U.S.A. Canada Post International Publications Mail Product (Canadian Distribution) Sales Agreement No. 410667. Canadian GST registration number is R140496720.



Big Blue back in print business

IBM color laser is \$3,500 less than the competition

By Leander Kahney

After a five-year absence, IBM Corp. last week announced that it is back in the network printer business. At PC Expo in New York, it unveiled a color laser printer that is almost \$3,500 less than its competitors, along with three monochrome workgroup printers.

Due this week, the \$8,999 Network Color Printer will output 3 pages per minute at 600 by 600 dpi using a Canon engine and a built-in Fiery XJ hardware controller from Electronics for Imaging Inc. The printer uses a MIPS R4600 processor running at 100 MHz. It also contains a 340-Mbyte hard drive.

The new monochrome printers are the \$1,599 Network Printer 12, the \$1,999 Network Printer 17 and the \$3,499 Network Printer 24, which print 12, 17 and 24 pages per minute, respectively. The model 12 and 17 use Fuji Xerox engines; the model 24 uses a Canon

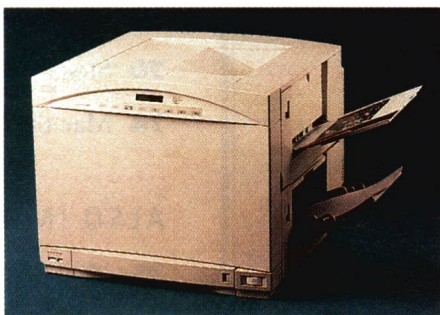
engine. All units ship with Mac OS drivers and include Adobe PostScript Level 2.

"These are very solid products and very aggressively priced," said Robert Fennell, director and principal analyst at Dataquest Inc. of San Jose, Calif. "Especially the color laser printer, which is considerably cheaper than the competition. We're wondering how they did it."

Fennell said the IBM printer compares to Digital Equipment Corp.'s \$13,999 Colorwriter LSR 2000 and Canon USA Inc.'s \$12,500 LBP 360PS, both of which use Fiery controllers (see 01.22.96, Page 6).

Paul Preo, senior product marketing manager for IBM's network printer family, said savings

See IBM, Page 6



IBM's new \$8,999 Network Color Printer will print up to 3 pages per minute, thanks to a Fiery RIP and a 100-MHz RISC chip.

SyQuest gains \$20 million, names CEO

By John Poultney

SyQuest Technology Inc., mimicking the growing capacities of modern storage devices, stuffed \$20 million more into its coffers. The infusion is good news for the beleaguered removable-storage company, which has been hit hard by competition from Iomega Corp.'s popular Zip drives and squeezed by minuscule margins on its EZ135 cartridge drives.

The cash was derived from a convertible preferred stock offering to institutional investors, wherein 16.6 percent of SyQuest's outstanding stock was earmarked for later conversion at 77 percent of the market price, to a maximum of \$11 per share.

Of the \$20 million raised, 75 percent is held in an escrow account for operating expenses. Some of the remainder, SyQuest said, will be used to maintain the company's listing on the NASDAQ exchange; the company's net worth as stated in a May 14 filing with the SEC was less than the minimum \$1 million required for NASDAQ membership.

"This gives SyQuest some breathing room to get its act together," said Bob Katzive, vice president of Mountain View, Calif.-based Disk/Trend Inc., a market research company specializing in storage issues. "They

See SyQuest, Page 6

Waterloo turning new leaf in Maple V

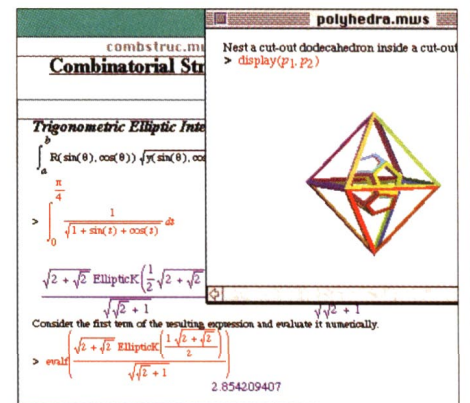
By Leander Kahney

Waterloo Maple Inc. recently shipped a major revision to its mathematical problem-solving software, Maple V.

Dubbed the Power Edition, Maple V Release 4 now runs native on Power Macs.

The company said it extended Maple's mathematical algorithms in Release 4 and folded in new routines for dealing with piecewise-defined functions. The update comes with an improved equation editor that Waterloo Maple said handles inequalities and inverse trigonometric functions.

Release 4 includes new two-dimensional geometry capabilities and features a revamped interface. The company also beefed up



The Power Edition of Maple V Release 4 has been revved up for the Power Mac, but it also includes hypertext links and sharper graphics.

the application's word processing capabilities, adding collapsible outlining and support for hypertext links.

"It's a vast improvement," said Bill Bauldry, a Release 4 beta tester and professor of mathematics

See Maple, Page 6

OnTime Mac client turns 4.0

By John Poultney

Campbell Services Inc. has penciled in a fall date for Version 4.0 of its OnTime Enterprise client for the Macintosh. The client for the cross-platform groupware scheduler will be unveiled mid-July at the Mactivity '96 networking convention in San Jose, Calif.

OnTime allows users to schedule events in other users' date books and send notification of pending meetings. Mac clients can also view and edit calendars running on DOS or Windows machines.

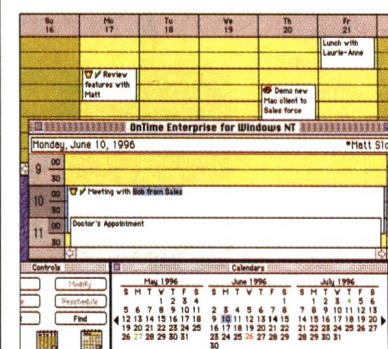
The new Mac client, which will be available for both 680x0 and Power Macs, will include day and week planners with in-line editing and notify users when they receive e-mail from a handful of packages, including Lotus Development

Corp.'s Notes and cc:Mail and Quarterdeck Corp.'s Quarterdeck Mail. The update will also allow users to open more than one calendar at a time.

OnTime Enterprise servers run on Windows NT, Novell NetWare and Banyan Vines machines.

Pricing for the new client has not been announced. The company said it expects to ship the Mac client by September.

Campbell Services Inc. of Southfield, Mich., can be reached at (810) 559-5955 or (800) 559-5955; fax (810) 559-1034; <http://www.ontime.com>.



Campbell Services' upcoming version of its OnTime Enterprise Macintosh Client will allow users to open several calendar windows at once.

OpenDoc for Windows to go beta

By Clifford Colby

Another part of the OpenDoc puzzle will fall into place this week when IBM Corp. releases the beta version of OpenDoc for Microsoft Windows 95 and NT.

IBM said it will start shipping the beta to its customers this week and make the software available on its Club OpenDoc Web site, <http://www.software.ibm.com/clubopendoc>, by the middle of July. The company said it expects to ship the final OpenDoc soft-

ware developers kit for Windows in the fourth quarter.

IBM said the Windows beta will include technology based on ComponentGlue, which lets OpenDoc parts and OLE objects be used interchangeably.

The Windows version joins IBM's other OpenDoc releases for OS/2 and AIX and Apple's OpenDoc offering for the Mac.

IBM also announced plans to integrate OpenDoc with Java Beans, a set of APIs from Sun Mi-

croSystems Inc. of Mountain View, Calif., that will allow developers to create Java-based software components.

IBM said its effort, called Arabica, will use OpenDoc to link and embed Java Beans. IBM said it expects to ship beta versions of Arabica for Windows and OS/2 in the fourth quarter.

IBM Corp. of Armonk, N.Y., can be reached at (520) 574-4600 or (800) 426-3333; askibm@info.ibm.com; <http://www.ibm.com>. □

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Each major component of the Network Server 700 can be accessed in about the time it takes to read just a few of these captions—60 seconds or less.

Add up to six PCI cards—Ethernet, FastEthernet, PCI RAID disk array (only four of these, sorry), or a wide array of third-party PCI cards—in the six (count them, six) open slots.

You can easily add third-party memory DIMMs, SCSI disk drives and tape drives to our Network Servers. We won't, however, refuse your hard-earned money if you prefer genuine Apple® components.

Not that we're saying you'll ever need it, but an optional, 7-day-a-week, 24-hour-a-day service plan is available. To learn about priority queuing, next-day on-site service and more, simply contact your Apple Premium Server Reseller.

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Vocabulary test: Apple Network Servers are binary-compatible with >10³ proven AIX apps, no recompiling or porting necessary.

You get free, "try before you buy" software, too: Helios and IPT software for OPI publishing and file and print sharing, Legato Networker software for backup and recovery, and APC software for uninterruptible power supply support.

Is there any such thing as too much disk space? A great way to find out is to plug in a MegaDrive Systems' RAID array with its whopping one terabyte of storage.

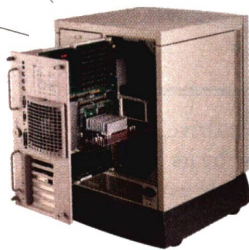
With a rated WebStone 1.1 benchmark performance of 12 megabits per second, the Apple Network Server 700 makes any other server look like a benchwarmer. That's enough raw power to support eight T1 lines and millions of Internet connections a day.

Yes, there's a third, built-in, external SCSI port, perfect for adding up to seven more devices. Like the 20GB Digital Linear Tape (DLT) Drive from Quantum.

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Except this.



Intuit deducts ProSeries

By John Poultney

Intuit Inc. opted for the short form this month when it officially wrote off its ProSeries for Macintosh professional tax-preparation software. The company said it will continue to develop its popular Mac-InTax personal and business lines.

Intuit said the lion's share of the professional tax-software market is on the Microsoft Windows side and that fewer than 1,000 customers purchased Mac versions in 1995. In the consumer arena, however, the Mac is still quite strong. Intuit said it sold 272,000 units of the MacInTax package last year.

"Our decision to drop ProSeries results from a combination of factors," said Bob Meighan, group product manager for professional tax products at Intuit, "including a dearth of complementary applications for the Mac, and the professional market moving toward Windows 95. For us, continuing development for the professional Mac market is just not economically feasible."

Intuit is offering registered ProSeries owners a free upgrade to the 1996 Windows version, which will read Mac-authored ProSeries documents from 1995 and before.

Intuit Inc. of Menlo Park, Calif., can be reached at (415) 944-6000, (800) 624-8742 or (800) 934-1040 (for ProSeries inquiries); <http://www.intuit.com>. □

Apple is tops in brand loyalty

Mac users are the most loyal in the personal computing world, a survey revealed last week.

The report by Computer Intelligence InfoCorp, a research firm in La Jolla, Calif., found that 87 percent of Mac owners who bought a new machine last year chose another Mac.

Behind Apple were Dell Computer Corp. with 74 percent brand loyalty, Hewlett-Packard Co. with 72 percent, Acer Inc. with 68 percent and Gateway 2000 Inc. with 66 percent.

David Tremblay, senior industry analyst at CII, said Apple's loyalty was based on the Mac OS rather than software-compatibility issues. But Tremblay added that software compatibility was the major reason Intel-standard PC users don't change to the Mac. "Once you've made a commitment to the Wintel world you're unlikely to switch, no matter how much you like the Mac." □



Howard Enterprises' TeleCamera HA5400 can focus on subjects 1.5 inches away.

Video cameras move in close

By Kelly Ryer

Howard Enterprises Inc. last month released the HA5400, a new color video camera designed for videoconferencing. The \$368 device is the latest in the company's TeleCamera line.

Designed for NTSC resolutions, the HA5400's CCD (charged-coupled device) captures 270,000 pixels at 330 horizontal television lines and has a light sensitivity of 5 lux. It includes a built-in microphone, automatic white balancing, an automatic iris and composite-video output at 330 horizontal television lines.

The HA5400's lens allows it to focus on objects that are only an inch and a half away from the lens. The camera was originally developed to facilitate skin-cancer diagnosis for an Italian cancer institute, the company said.

Howard also shipped the \$368 HA5300 model, which is identical to the HA5400 but works with PAL (European) systems.

Both cameras ship with a power adapter, cables and a swiveling base unit.

Howard Enterprises Inc. of Camarillo, Calif., can be reached at (805) 383-7444; fax (805) 383-7442; stanh@howent.com; <http://www.howent.com>. □

Apple Imaging says bye-bye to Bailey

One of Apple's top executives quit last week to join NEC Technologies Inc.

Terry Bailey, former senior vice president and general manager of Imaging, will become senior vice president in charge of the NEC marketing group starting July 1.

"I'm very excited about the opportunity," Bailey said. "It's a great challenge. ... It took a very special offer to pry me away from Apple."

Bailey said he decided to quit a month ago, but two weeks later he was promoted to senior vice president of Apple's second-largest hardware division following CEO Gilbert Amelio's May reorganization. The

promotion didn't change his mind. Bailey worked at Apple for five years.

"I had difficulty making the decision to leave," he said, "but ... the decision was a firm one." The draw of NEC, he said, had a lot to do with "sitting at the president's desk and reporting directly to Jerry Benson."

Bailey will work at NEC's Chicago sales and marketing offices. NEC's headquarters is in Boxborough, Mass.

Tom Mager, director of engineering at Apple's Imaging division, and Maury Austin, director of business development, will run the division until a replacement for Bailey is found. □

SyQuest

From Page 4

needed to do something like this."

Katzive said SyQuest's recently introduced EZFlyer 230 drive holds promise for the company. "EZFlyer has a higher storage capacity than Zip, which is generally an advantage," he said. But Roy, Utah-based Iomega "may counter in a few months."

SyQuest recently cited lean margins on the EZ135 as a factor in its money woes, yet earlier this month it cut the price by 40 percent to \$119. "That move was obviously in reaction to the Zip's dominance," Katzive

said. "They discounted that drive's impact and were taken by surprise by its popularity. SyQuest figured the battle would take place with higher-capacity products."

In other news, the company announced that Edwin L. Harper has been named CEO, replacing Syed H. Iftikar, and was elected to the board of directors. Harper was the company's chief operating officer. Iftikar will remain on SyQuest's board of directors.

SyQuest Technology Inc. of Fremont, Calif., is at (510) 226-4000 or (800) 245-2278; fax (510) 226-4100; sales@syquest.com; <http://www.syquest.com>. □

Maple

From Page 4

ics at Appalachian State University in Boone, N.C.

"This is a major revision," he said. "If nothing else, it's worth getting it for the speed improvements alone."

Bauldry said a graphing function that took 70 seconds in Release 3 running in emulation now takes four seconds in Re-

lease 4 running on a Power Mac.

Maple V Release 4 is available for 680x0 and Power Macs and costs \$995; educational institutions can purchase the software for \$695. Users of Release 2 or 3 can upgrade to Release 4 for \$199.

Waterloo Maple Inc. of Waterloo, Ontario, is at (519) 747-2373 or (800) 267-6583; fax (519) 747-5284; info@maplesoft.com; <http://www.maplesoft.com>. □

IBM

From Page 4

were the result of hardware configuration and Big Blue's efficient distribution channels. Most significantly, he said, the color printer produces continuous tones using much less RAM than is typical: 16 Mbytes rather than 32 Mbytes.

IBM was restricted from competing in the mainstream printer market until March because of a licensing agreement with Lexmark International Inc. of Lexington, Ky., that limited Big Blue to manufacturing printers for mainframes only. Lexmark was spun off from IBM in 1991.

Now IBM is aiming for Lexmark's position in the network printer market. "We're going to make a big splash," Preo said. "We intend to be a strong No. 2 in the market within two years."

IBM Corp.'s Printing Systems Co. of Southbury, Conn., is at (303) 924-6300 or (800) 793-5888; fax (303) 924-7573; <http://www.can.ibm.com/ibmprinters>. □

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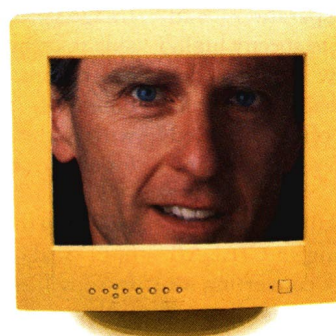
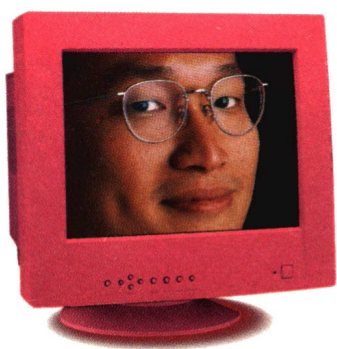
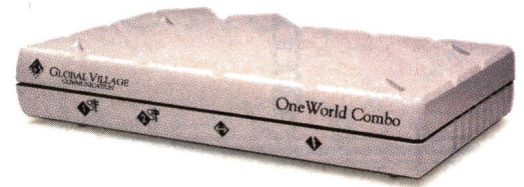
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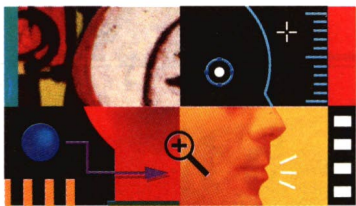
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PAGE 8

Graphics Applications • Publishing • Multimedia

06.24.96 MACWEEK

ImageXpress to tone up its scan-control plug-in

ScanPrepPro to get color tools

By Matthew Rothenberg

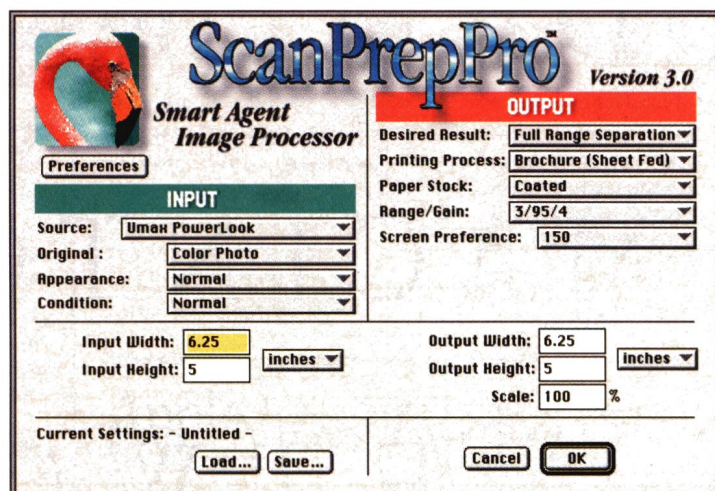
ImageXpress Inc. in July will hone the capabilities of ScanPrepPro with a major revision to the scan-optimization plug-in for Adobe Photoshop.

ScanPrepPro 3.0 will cost \$695, the same as the previous version; the upgrade will add a welter of new features that improve the product's color-handling and preview capabilities.

During a scan, the upgrade will let users choose specific color-correction tools within Photoshop, such as color balance, curves, levels, hue, saturation or selective color.

By tagging scans as RGB Archive files, users of Version 3.0 will be able to optimize a raw scan on the fly without specifying final resolution, tonal range or file type.

Version 3.0 will switch automatically to a CMYK preview mode when a scan is going to be



ScanPrepPro 3.0 will plug 29 new features into the scan-optimization module's color-handling and preview capabilities.

used for color separations, and users will be able to specify highlights and shadow as well as dot gain for individual CMYK colors. It will also offer enhanced control of high-key halftones and separations.

ScanPrepPro 3.0 will perform all color processing in CIELAB color space before converting an image to CMYK, according to

ImageXpress. Users will also be able to create custom settings for separations and range-gain combinations and display them within the ScanPrepPro menu for easy access.

The software will include a new view that will let users adjust light or dark images. The software will offer an accurate pre-

See ScanPrepPro, Page 10

Multi-Ad Creator 4 gets boost from PPC

Graphics import, export enhanced

By Stephen Howard

Multi-Ad Creator rose to Version 4.0 last week on the strength of a Power Mac-native speed jump. The advertising-creation software from Multi-Ad Services Inc. also gained several import and export enhancements.

The \$995 Creator 4.0, released at Nexpo96 in Las Vegas, runs as much as 85 percent faster than Version 3.8, the company said. The performance boost affects all aspects of the program, including printing and manipulating images. When rotating images, for instance, now the full picture, rather than just an outline,

moves. The new spelling checker and hyphenation components are Power Mac-native as well.

"It's far, far faster, which was really needed," said beta tester Josh Turiel, director of information systems at Adlife Marketing and Communications Inc. of Norwood, Mass. Previously, Creator was slower than general-purpose page-layout programs at screen redraws and printing, he said, but his 70 users stuck with the software because it was well-suited to the supermarket fliers Adlife creates. Version 4.0 is "as fast or faster" than QuarkXPress and Adobe PageMaker, he said.

The Creator upgrade also gained the capability to export ads as TIFF or GIF files. With TIFF, users can export in 72, 144

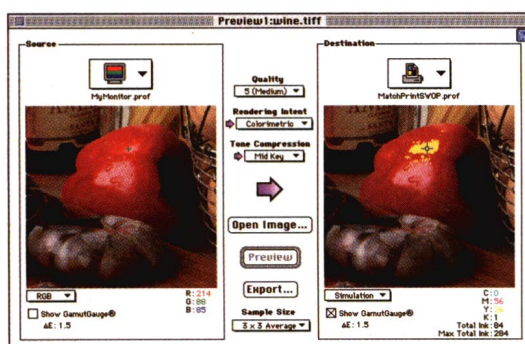
See Multi-Ad, Page 10

Candela highlights spot color in upgrade

By Rebecca Gulick

Candela Ltd. this month shipped a major update to ColorSynergy, a software package that creates color profiles for scanners, printers and monitors.

Like the previous version, the \$495 ColorSynergy 2.0



ColorSynergy 2.0 adds custom color palettes and Photoshop monitor setup tables. The update also includes support for Light Source's Colortron spectrophotometer.

generates profiles in a variety of formats, including ColorSync 2.0 and Adobe PostScript Level 2.

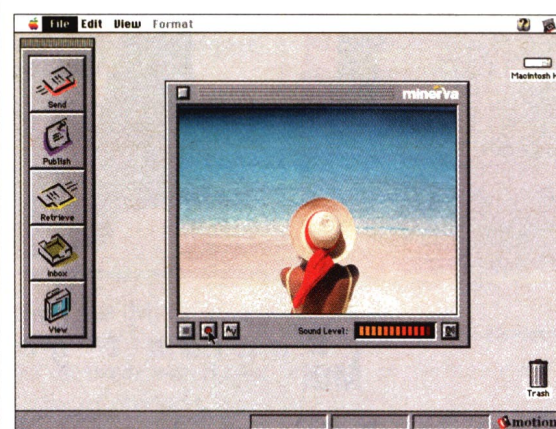
It now supports spot color by letting users design their own color palettes in its universal format. These palettes can be exported to applications such as Adobe Photoshop and Illustrator, Fractal Design Corp.'s Painter, and Macromedia FreeHand. Users can also import color palettes from an application to ColorSynergy to improve the accuracy of color within other applications or on output devices.

Version 2.0 can save monitor profile settings as a Photoshop setup file.

The update can create profiles of film recorders via its new interface with Light Source Inc.'s Colortron spectrophotometer, which the company said can increase the accuracy of transparency measurements. Users can now measure their own ANSI IT8 color targets and create custom reference files to get more-accurate profiles from their scanners.

Users can upgrade from Version 1.x for \$129.95.

Candela Ltd. of Burnsville, Minn., can be reached at (612) 894-8890 or (888) 662-6567; fax (612) 894-8840.



VideoShare's simple interface will allow users to capture MPEG video and then distribute it to clients by using the buttons on the left.

Minerva VideoShare system will be a collaborative effort

By Kelly Ryer

Minerva Systems Inc. and Emotion Inc. have teamed up to produce a collaboration system for digital video. The two companies said they plan to ship the \$25,000 Minerva VideoShare system this month.

The new system, which will allow users to capture and distribute digital video over most networks, combines the Minerva Publisher MPEG encoding system (see 03.25.96, Page 14) with

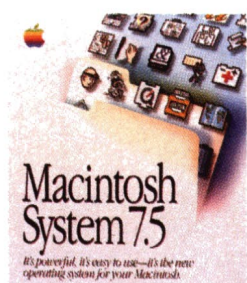
Creative Partner, a cross-platform, client-server distribution and reviewing software package from Palo Alto, Calif.-based Emotion.

According to Minerva, the two products will be closely integrated within a simple interface. Users will first use a single button to capture and encode MPEG video sequences using the Mac-based Minerva Publisher component, which will operate from

See Minerva, Page 10

Nelson needs to get on the net, Freiman can't find a file, and Peterson's forgotten his password. Again.

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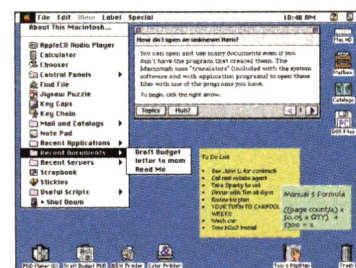
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This offer is good only in the U.S. Canadian customers please call 1-800-361-6075. Macintosh System 7.5 runs on Apple Macintosh, PowerBook and Power Macintosh computers and requires 4 MB of RAM, 8 MB for Power Macintosh systems (8 MB recommended for all systems). ©1995 Apple Computer, Inc. All rights reserved. Apple, the Apple logo, Macintosh, PowerBook and Power Macintosh are registered trademarks of Apple Computer, Inc. in the U.S. and other countries. The Mac OS logo is a trademark of Apple Computer Inc. All other trademarks are the property of their respective owners.

Markzware launches FlightCheck 2

By Rebecca Gulick

Markzware Software recently shipped a free upgrade to its FlightCheck pre-press verification software for PostScript documents.

FlightCheck 2.5, available now for \$399, features support for PageMaker 6.0, the

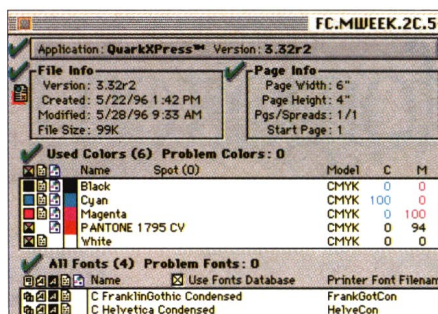
latest release of Adobe Systems Inc.'s page-layout program.

Ground Controls, which are customizable panels for specifying elements of a document that need to be checked, can now be saved to a disk and reloaded at any time, Markzware said. This new capability lets service bureaus send customized Ground Controls panels out to customers, helping to standardize work flow. The panel can also be password-protected.

According to the company, FlightCheck's custom-output forms are easier to design and use, thanks to new data fields that automatically display font, color and image information for each document.

Making it easier to gather fonts that will be sent to a service bureau along with a document, FlightCheck alerts users to unused style-sheet fonts so they won't be misled by missing-font warnings.

FlightCheck "helps automate the process. ... It's very cool," said Scott



FlightCheck 2.0 supports PageMaker 6.0 and adds more control over Ground Controls panels. Custom output forms have also been polished.

Cappel, president of Sorrento Mesa Printing of San Diego. "It makes it easier to spot potential problems before they become big ones."

Markzware Software of Santa Ana, Calif., is at (714) 756-5100 or (800) 300-3532; fax (714) 756-5108; info@markzware.com; http://www.markzware.com/.

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**Server to
the Macs...**

Minerva

From Page 8

within the Creative Partner software. Video can be encoded from composite, S-video and component YUV sources, and audio can be imported in AES/EBU or balanced analog audio format.

After capture, users will be able to send their video to Macintosh and Microsoft Windows clients over several types of networks, including Ethernet, token ring, Fast Ethernet, 28.8-Kbps modem, ISDN, switched-56, T1, T3, Asynchronous Transfer Mode and Fiber Distributed Data Interface.

Emotion's server, which requires a 486- or Pentium-equipped host PC, supervises the distribution of the large digital files. The Creative Partner server will generate a complete audit trail of each transmission, allow files to be scheduled for future delivery and ensure that client

machines have enough free disk space to hold the file packages.

Once the video has arrived at the client machine, the reviewer will be able to control video playback and annotate individual frames with pen, text and voice-markup tools.

The Minerva Publisher unit requires a Power Mac 7500 or 7600 with at least 48 Mbytes of RAM and a 2-Gbyte drive. The Creative Partner portion includes a Novell NetWare 4.1 license but requires a 486- or Pentium-based PC with 24 Mbytes of RAM and a 1-Gbyte hard drive.

The basic system will include a license for up to 10 clients; additional five-user licenses will be available for \$1,250.

Minerva Systems Inc. of Santa Clara, Calif., can be reached at (408) 970-1780 or (800) 806-9594; fax (408) 982-9877; info@minervasys.com; http://www.minervasys.com.

Multi-Ad

From Page 8

or 288 dpi. With GIF, users can save the ad in an optional interlaced format, so the on-line image is displayed progressively rather than all at once.

GIF export is "the token Internet feature," Turiel said. The format is limited to a maximum of 256 colors, but Creator 4.0 "does a very good job with mapping down colors; it even handles pages with photographs," he said.

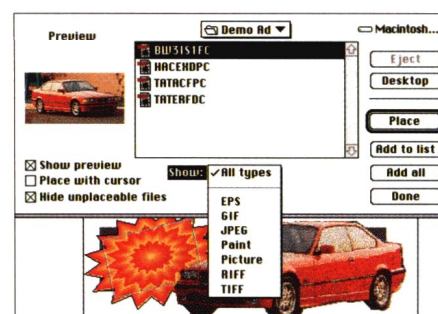
In the new version, Multi-Ad increased the control of the display of graphics. Users can view images placed in ads at variable resolutions: either the image's real resolution or a range of settings from 36 to 288 dpi. In addition, picture previews are visible in Open and Place dialog boxes.

Graphics imported from Photoshop now retain any clipping paths defined in Adobe Systems Inc.'s image editor. While

Creator has its own clipping tools, Photoshop's are more detailed and are preferred by many users, Multi-Ad said.

Upgrades from Version 3.8 or later are \$140; upgrades from earlier releases are \$200.

Multi-Ad Services Inc. of Peoria, Ill., is at (309) 692-1530 or (800) 447-1950; fax (309) 692-6566; http://www.multi-ad.com.



Multi-Ad Creator 4.0 now displays thumbnail previews in its Place dialog box.

Filmsetter gains halftone option

By Rebecca Gulick

Shepherding traditional pre-press users back into the fold, LaserMaster Corp. this month shipped a free software upgrade for the PressMate-FS, the company's chemical-free desktop filmsetter. It features higher-quality traditional halftoning as well as stochastic screening.

Equipped with Version 4.0 of the Color-Mark Software/RIP, the PressMate-FS can output 2,400-dpi text and line art with 133-line-per-inch halftones. The device originally offered only stochastic screening, a method that varies dot placement rather than size, and 121-line-per-inch halftones.

The \$14,995 PressMate-FS, which shipped in December 1995, outputs positive and negative film measuring up to 12 by 26 inches. It uses a thermal mechanism that does not require developing chemicals.

The device can image film at up to 2.5 inches per minute with an accuracy level of 0.2 percent, according to the company. At 600 dpi, it can output 5 inches per minute.

The company's own ThermalRes film is \$3 per square foot and comes in 12-inch-wide rolls that are 90 feet long. The company said it this fall will offer a new canister to make handling the film easier.

LaserMaster Corp. of Eden Prairie, Minn., can be reached at (612) 944-9330; fax (612) 944-0522.



LaserMaster's chemical-free PressMate-FS desktop filmsetter offers 2,400-dpi resolution and 133-line-per-inch traditional halftones.

ScanPrepPro

From Page 8

view of dot gain while maintaining the correct dot structure for the printing press.

It will feature three new descreening settings optimized for brochures, magazines and newspapers, ImageXpress said. In addition, users of Version 3.0 will be able to specify the number of lines per inch numerically.

Users will be able to ghost images for type overprint and specify output for the Internet.

The new version will support most digital cameras, ImageXpress said.

Upgrades will be free to users who purchased ScanPrepPro this year and \$150 for others. The new version will include a hardware dongle that will enable users to download maintenance upgrades.

ImageXpress Inc. of Lawrenceville, Ga., can be reached at (770) 564-9924; fax (770) 564-1632; http://gracenet.com/scanprep.

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Push-button color still in the shadows

By Bruce Fraser

Despite its minuscule user base, the field of color-management systems continues to grow and change at a dizzying pace. Undoubtedly the most far-reaching development in this area has been the release and acceptance of the ICC device profile standard as a cross-platform, open specification for color-management device profiles.

A slew of third-party device-profiling tools have been spawned by the ICC (International Color Consortium) profile spec, in tandem with a new generation of inexpensive handheld spectrophotometers — such as Colortron from Light Source Computer Image Inc. of Larkspur, Calif.; DTP 22 Digital Swatchbook from X-Rite Inc. of Grandville, Mich.; and ColorMouse from Color Savvy Systems

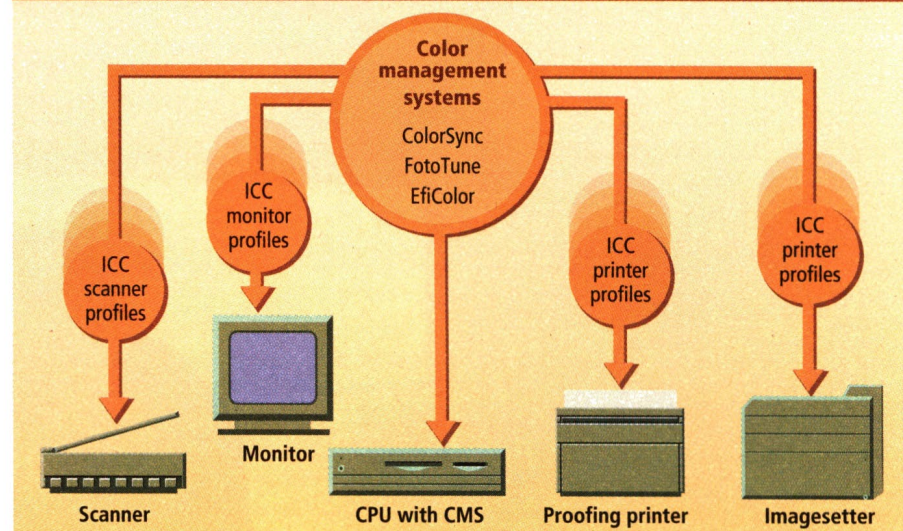
The pre-press world has yet to embrace CMS tools, but ICC profiles could change all that.

Inc. of Springboro, Ohio. These tools free the user from reliance on a single color-management system vendor for device profiles and hold the promise of greater accuracy from custom rather than generic profiles.

Besides offering users a greater range of profiles, the ICC profile spec opens the door for interoperability of color-management systems, at least in theory. When all systems use the same ICC device profiles, it should be possible for users to mix and match color-management systems.

Color-management systems running under Apple's ColorSync architecture should communicate transparently with one another, but as yet most applications using color management are talking di-

Color-management systems have several moving parts



rectly to the system rather than going through the ColorSync APIs. However, all the major players now use ICC profiles, with the exception of Rochester N.Y.-based Eastman Kodak Co., which has been slow in bringing an ICC-compliant version of its color-management system to market.

Tighter control

In addition to the ICC profile spec, several other forces are converging to drive color management to market acceptance. The nature of print manufacturing is changing in ways that make color management easier and more necessary. The trend in conventional presses is toward ever-tighter process control, with on-press densitometers scanning each press sheet and adjusting the ink keys automatically to maintain correct density. The reduction in variability in the print process makes color management more feasible.

Filmless printing processes make traditional proofing methods impossible, whether using direct-to-plate on conventional presses or on digital presses, such as the Indigo and the Agfa Chromapress from Agfa, a division of Bayer Corp., of Ridgefield Park, N.J. Short of relying on press proofs, color management seems the best strategy for proofing these types of printing.

New types of media and new types of process color printing are also driving color management into the pre-press industry. In the past, pre-press shops relied heavily on drum scanners to produce print-ready CMYK scans. However, they now find themselves having to deal more with non-traditional image sources that drum scanners can't handle, such as RGB digital camera files or YCC-format Photo CD images. As a result, pre-press shops are turning to color-management solutions to deal with the new world of RGB images. In addition, CMYK scans are almost useless for jobs using six or seven process colors, for two reasons: They are designed for the limited gamut of four-color process, and the kind of black generation needed for six- or seven-color process printing is radically different from that of traditional CMYK.

Thanks to all these developments, the pre-press industry is slowly beginning to see color management as a necessity rather than a threat. In March, at Seybold Seminars Boston 96, the color-management panels not only played to standing-room-only crowds, they also featured more presentations by users than by vendors.

Despite real advances, application support is spotty at best, and many questions remain concerning the role of the device profile within a single color-management system and across multiple systems. Support for EPS files is also an issue, since it is still problematic — most color-management systems handle only TIFF files.

Support your local system

Color-management support in graphic arts applications takes the form of either hard-wired links to a specific CMS or bolt-on third-party additions. QuarkXPress, for example, still includes the orphaned EfiColor, which has seen no new development for more than a year, has no native Power Mac version and lacks profiles for many current output devices. Some third-party QuarkXTensions allow support for ColorSync, Agfa's FotoTune and Kodak's CMS. DayStar Digital Inc. of Flowery Branch, Ga., licensed the latter from Kodak, and it sold as part of DayStar ColorMatch, which is no longer on the market.

Kodak has expressed an intention to replace the product with an ICC-compatible version, but no ship date has been announced. Quark Inc. of Denver announced that XPress 4.0 will use ColorSync as its main CMS, but the delivery date for XPress 4.0 is unknown.

Adobe Photoshop has arguably attracted more support from CMS vendors than any other application but offers relatively little in the way of native CMS support. Photoshop ships with a small subset of Kodak's CMS that allows users to import Photo CD images into either Lab or monitor RGB color spaces. With additional profiles from Kodak, it also lets users import Photo CD images directly into a

See Color, Page 14

ColorSync gets stealth support

It has been more than a year since Apple shipped ColorSync 2.0 with so little fanfare that it almost qualified as a stealth upgrade. In that time, there has been new support for the ICC profile specification, which ColorSync uses. But support for ColorSync (as a CMS and as a set of CMS APIs) is slow in coming.

Apple's vision for ColorSync, with automatic screen-to-print color matching being handled by the LaserWriter 8 driver, works only with applications that use the printer driver to generate PostScript, which rules out most graphic arts applications. It works exquisitely for printing PICTs from SimpleText but not at all with the mainstream graphics applications, all of which insist on rolling their own PostScript. As of yet, none of the mainstream productivity applications

such as spreadsheets, databases and word processors (which would be good candidates for using the system-level ColorSync features), has opted to support ColorSync.



It's hard to blame the developers, though, given the lack of support for ColorSync from Apple itself. A ColorSync 2.0 white paper does exist, and masters of Web search engines may even be able to track it down, but it's noticeably thin on details.

Linotype-Hell Co., whose LinoColor engine is the heart of ColorSync's color-management technology, has done more than Apple

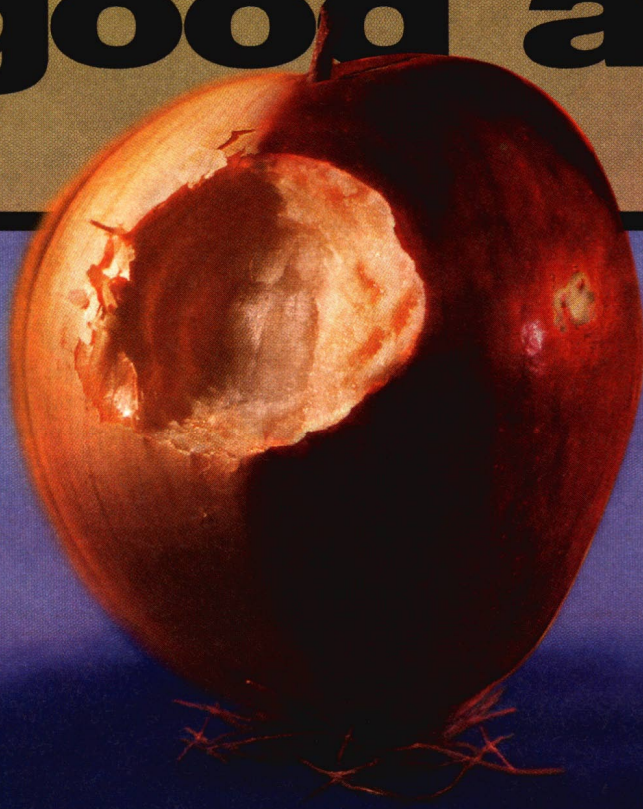
to evangelize ColorSync. This is particularly ironic considering that color management is one of the few areas where the Mac is indisputably years ahead of any competing platform.

Quark Inc. has announced that ColorSync will be the CMS of choice in XPress 4.0, and this, combined with the large number of device profiling tools available, will undoubtedly give the technology a shot in the arm.

Apple's ColorSync plug-ins for Adobe Photoshop are solid, useful pieces of software but hard to find.

The hope is that Apple won't let ColorSync go the way of Apple Real-Time Architecture, GWorld (graphics world) and other forgotten Apple technologies. Fortunately, the groundswell of third-party support ColorSync has already garnered makes this seem unlikely. — By Bruce Fraser

Oddly, most PC cards built for two functions are only good at one.



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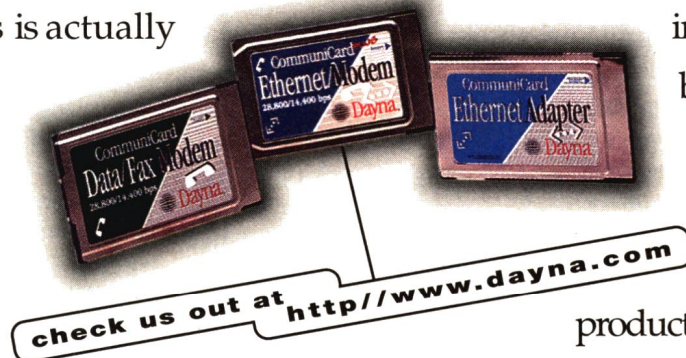
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CASE STUDY

One user embraces CMS as key to consistent color

By Eric Taub

Andrew Rodney, self-described "digital dog" of Camera and Darkroom Digital Inc. of Santa Fe, N.M., has embraced color management as an integral tool that provides customers with consistent and reliable color output.

Camera and Darkroom Digital is a graphics service bureau that supports designers, photographers and artists by producing scans and retouching photographs. Color-management tools, coupled with Apple's hardware standards, have allowed Rodney to cut down the time he used to spend calibrating monitors, creating test proofs and then re-adjusting the output.

"The [Intel-standard] PC world is so far behind Macintosh with regard to color management," Rodney said. "With PCs, everyone can write a different driver for a video monitor. And any goombah in a garage can put together a system. You have no consistency in PC land, making color management a difficult goal."

By the numbers

Rodney said he has incorporated color-management systems into his operation for the past three years. His shop is equipped with Genesis MP boards from DayStar Digital Inc. of Flowery Branch, Ga., and Macin-

Andrew Rodney is searching for CMS tools that will mature along with the technology.

tosh 8100 and 7500 machines. His scanners come from ScanView of Foster City, Calif., and Agfa, a division of Bayer Corp., of Ridgefield Park, N.J. The color-management system is Eastman Kodak Co.'s ColorMatch system, working with Adobe Photoshop.

"A lot of people think that color management is a joke," Rodney said. "Many

people still do things by the numbers. That's fine for those who know CMYK values for skin tones. But I wasted a lot of time and money trying to get things right before CMS was available."

While the color-management process calls for calibrating the scanner and the monitor, Rodney does not bother with calibrating. "Often, scanning the image is the first step in improving it," he said. "You may not want to match the original because the original may be too dark or the colors may be off," he said. "With the exception of Photo CD images, [if] we want to open up the shadows or remove a cyan cast, that automatically means you can't use a profile for that scanner."

Once Rodney decides that the scan looks right on the monitor, he brings in the color-management system. When he begins the process, he creates a prescan, making various judgments necessary to correct the image that he sees on the monitor. In



STEVE NORTHUP/BLACK STAR

According to Andrew Rodney of Camera and Darkroom Digital, color management is no magic bullet, but the tools have helped the company get more consistent results.

addition to his visual analysis, he uses a densitometer to ensure that highlights, shadows and neutral values are correct. Then he re-scans the file.

Ultimately, color management is only as good as the calibration of the output device. "CMS is not a magic bullet," Rodney said. "Without proper printer calibration, a service bureau can still print out an image that is too dark, [too] light or off-color."

Room for improvement

While color-management tools have helped make Rodney's work faster to output and more consistent in its results, he said he still sees room for improvement. For instance, when previewing a file in the ColorMatch system, the user cannot currently adjust the output profile. Instead, it's necessary to close the file, alter the settings and then re-open the file — an extraneous step. "Profiles are available for generic machines," Rodney said. "But every different type of paper will produce different results. We need a way of going in and tweaking the profiles," Rodney said.

"Vendor-supplied, noncustom monitor

profiles are the most useless," Rodney said. "Every monitor is different, so you really need a tool that allows you to create individual profiles."

Rodney said he's looking forward to the continued acceptance of Apple's ColorSync 2.0 technology. The adoption of this open architecture will bring a software standard to color management.

"When more people and companies use it, it'll be like PostScript," he said. "It will let users handle images the way that we handle fonts: the same way across applications."

Rodney said he is frustrated that there is a lack of usable, reliable output profiles available in the ColorSync technology.

"I neither know where to find enough of them nor how accurate they are," he said. "There are companies out there writing ColorSync profiles, but I don't know if they've examined 500 different scanners or printers to get accurate results."

Rodney has considered switching to Agfa's FotoTune CMS. "FotoTune has most of the capabilities that Kodak's CMS has, and I want a product that will mature along with the technology," he said. □

Color

From Page 12

CMYK color space. The discontinued DayStar ColorMatch offered additional functionality, such as soft proofing and color management of non-Photo CD images. At present, there's a significant hole in Kodak's CMS support for Photoshop.

With some cajoling, Photoshop can pick up Monitor Setup information from the ColorSync System Profile, but that's about the extent of its native ColorSync support. A free set of plug-ins from Apple provides fairly comprehensive support for transforming images from one device's color space to another's, but features such as interactive soft proofing (being able to edit an image that is on the screen) would require tighter integration with the application than the plug-in architecture offers.

Agfa's FotoTune offers color-space transformation and static soft proofing through plug-ins. Some smaller vendors, such as Candela Ltd. of Burnsville, Minn.; Monaco Systems Inc. of Andover, Mass.; and Color Solutions Inc. of Encinitas, Calif., also offer Photoshop plug-ins that use proprietary

color-management engines. In the vast majority of cases, the color-management system is used to produce device-specific CMYK files in Photoshop, which are then passed down the production chain like other CMYK images.

Adobe PageMaker 6.0.1 offers complete color-management support. Its color-management architecture is open and modular. All that's needed to plug a particular system into PageMaker is a "glue module" that hooks the system to PageMaker's APIs. It supports Kodak's color-management system

and ColorSync, and the two systems are highly interoperable. One system is always the dominant one, but at the user's request individual elements — such as imported images or PageMaker-defined colors — can use the other system. PageMaker offers soft

proofing and system-driven color separations, which let users place RGB images in PageMaker and have the system transform them to CMYK at or before print time.

Two other applications, Live Picture 2.5 from MetaTools Inc. of Carpinteria, Calif., and LinoColor from Linotype-Hell Co. of Hauppauge, N.Y., provide significant native ColorSync support. Color-management support is missing in the current versions of the two main vector illustration programs, Macromedia FreeHand 5.5 and Adobe Illustrator 6.0, although ColorDrive from Pantone Inc. of Carl-

stadt, N.J., lets its users import color-managed color palettes to either application.

Application support will no doubt improve in the months to come, but this will create new questions. At the moment, it's unclear how similar the results will be when

Thanks to new developments, the pre-press industry is beginning to view color management as an asset rather than a threat.

different CMSes use the same profiles.

For example, the ICC profile spec includes a "private" field where CMS vendors can place proprietary information, so it's possible that a CMS using the private field will produce significantly different results than a CMS not using the field. Also, if custom device profiles become prevalent, users will need to make sure their service bureau uses the same profiles as they do.

There's also a large question related to the ICC profile itself. Currently, all the decisions about tone and gamut compression are encoded within the profiles. It seems unlikely that a single profile will give acceptable results on all types of images. This raises the specter of multiple device profiles designed to accommodate different image types. Profiles could be created to deal with the different tonal compression needs of low- and high-key images, for example.

It's certain that allowing for image-specific variables by creating multiple profiles for the same device won't make color management simpler. Perhaps the real value of CMS will be in allowing users to make one device simulate the behavior of another. □

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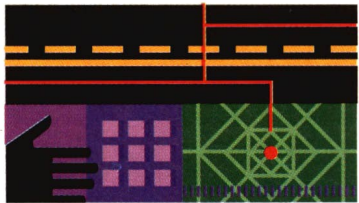
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GATEWAYS



PAGE 16

Internet • Web Authoring • LAN Management

06.24.96 MACWEEK

Kingston plays cards

Takes price lead in Fast Ethernet

By James Staten

Kingston Technology Corp. is using aggressive pricing to plant its flag in the Mac networking market.

The company, best known for its memory products, this month

shipped its first Fast Ethernet card for the Mac and priced it below \$150.

The \$139 EtherX PCI 10/100 Fast Ethernet Adapter uses the 21140 Ethernet controller from Digital Equipment Corp. of Maynard, Mass. It comes with an Open Transport driver and features the N-Way autonegotiation chip set from National Semiconductor Corp. of Santa Clara, Calif., to sense the speed of the network and switch between 10BASE T and 100BASE T modes.

Kingston's card is priced about 40 percent lower than most of its competitors in the Mac space. Cards from market leaders such

as Asanté Technologies Inc. of San Jose, Calif.; Dayna Communications Inc. of Salt Lake City; and Farallon Communications Inc. of Alameda, Calif., cost \$225 to \$300. Lite-On Communications Inc. of Milpitas, Calif., in January announced plans to ship Fast Ethernet PCI cards priced from \$129 to \$169 (see 01.29.96, Page 1). However, the company

See Ethernet, Page 18

Fast Ethernet is less than speedy. See Reviews, Page 27.

Users can create animations like this with the beta of Peak Technologies' WebPage Builder. A Java-based Web browser is required to view them.



Peak previews Java Web animation-creation tool

By Joanna Pearlstein

Peak Technologies Inc. this summer hopes to energize users' Internet experiences with WebPage Builder, a Java-based animation and Web page-creation tool.

The beta version of the product, now available in from the company's Web page, includes a collection of Java classes and applets that allow users to create animations for deployment on the Web. It lets users set movement paths for graphics and text, zoom graphics in and out, and create shadow effects for text.

The beta version of WebPage Builder saves finished animation files as Java applets that can be incorporated into HTML documents. A separate HTML editor is currently required.

Peak said it will release a full-fledged version of WebPage Builder by the end of July that will create HTML documents on its own. Users will be able to add elements to their pages via drag-and-drop.

Peak said the final version will provide multimedia capabilities similar to those in Director from Macromedia Inc. of San Francisco. It will let users drag icons to show where specific objects should be placed.

Peak said the final version of WebPage Builder will be priced at \$49.95.

Peak Technologies Inc. of Beltingham, Wash., can be reached at (360) 733-6010 or (800) 453-5322; fax (360) 733-7818; info@peak-media.com; <http://www.peak-media.com>. □

Zoom to buy Tribe for its remote access

By Joanna Pearlstein

Zoom Telephonics Inc. last week announced plans to acquire Tribe Computer Works Inc.

Zoom, a Boston-based maker of fax modems for Macs and Intel-standard PCs, said it hopes to get a foothold in the remote-access market through the acquisition of Tribe, which makes remote-access routers and hubs.

The founders of Tribe—President Gordon Ritter, CEO Jim Li and CFO Canh Le—will leave the Alameda, Calif., company to pursue other ventures, said Tribe Director of Marketing Diana Helander. There will be no layoffs, and Tribe will operate as a business division of Zoom, she said.

Helander called the acquisition “ideal” for both companies. “This gives Tribe access to working capital to expand, and it lets Zoom expand into the remote-access market,” she said.

The value of the acquisition was not disclosed. Under the terms of the agreement, expected to be finalized later this month, Zoom will issue additional shares of common stock in exchange for purchased assets.

The companies said the number of shares would be based on the purchase price and the closing price of Zoom's stock on the day before the transaction is completed. □

Quarterdeck: Q3 loss, WebStar for Mac late

By James Staten

WebStar 1.3 for the Mac can't ship soon enough for Quarterdeck Corp. The company recently announced that poor sales of Windows software will result in a significant loss for its third fiscal quarter, which ends June 30.

Nearly all of Quarterdeck's profits come from the Windows market. The company announced earlier this year that it plans to bring the majority of its Internet products to the Mac, yet only WebStar is expected to affect its sales in the fourth fiscal quarter. Version 1.3 of WebStar, which will provide an API for server plug-ins, has now been delayed until July. WebStar 2.0, which adds file caching and several other performance enhancements, was originally due this month but has now been pushed back to September.

The bad news gets worse for some of the company's workers. Quarterdeck of Marina Del Rey, Calif., said it is accelerating a restructuring program started earlier this year and will lay off 130 employees across all departments, or about 11 percent of its work force. The reorganization will align the company behind two fronts: utilities and Internet products.

Wall Street analysts had expected a net profit of 12 cents a share for the third quarter. Quarterdeck did not give a revised estimate of the size of the loss it now expects but said it will be worse than anticipated.

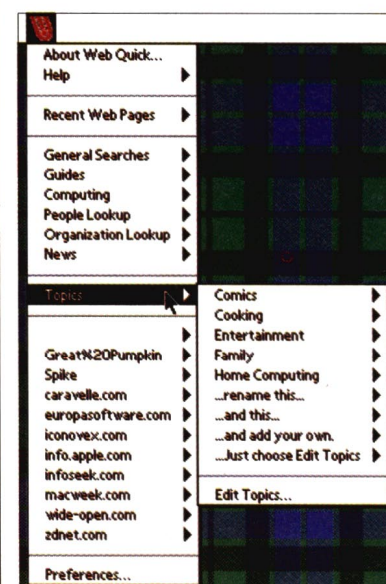
ProComm Plus, the company's flagship telecommunications application, was the sinker. Quarterdeck said sales of the Windows-only product dried up this quarter,

See Quarterdeck, Page 18

Now adds e-mail to Utilities

By Joanna Pearlstein

Fans of Now Utilities can now count e-mail among the package's diverse offerings. This month's update from Now Software Inc. includes Now Mail, a mini e-mail system that lets users transfer files to other Now Utilities users in the same zone on an AppleTalk network. To invoke Now Mail, a user selects a file, holds down a hot key and selects the Now Mail option. A Now Mail icon will flash in the recipient's menu bar when a file has been received.



Web Quick adds a menu to the Finder for organizing Web site bookmarks.

Also included in this month's update is a plug-in called Now Send For Help, which lets users automatically contact Now Software's technical support staff via e-mail.

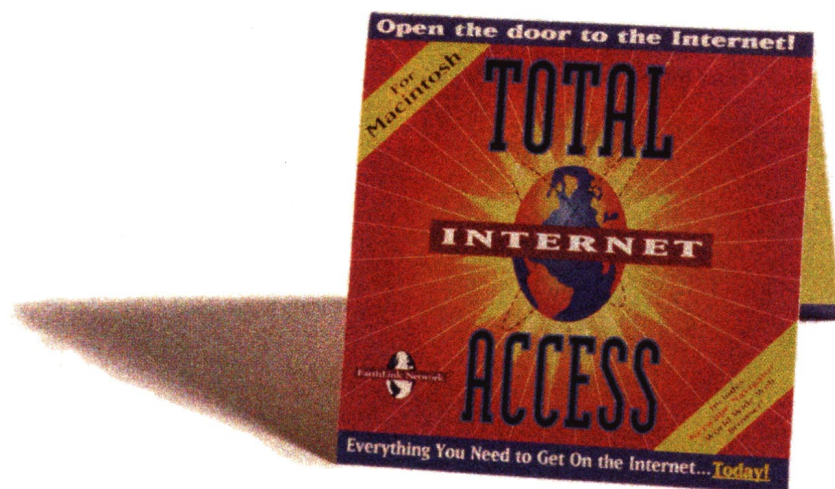
Other features include a collection of bug fixes and performance enhancements as well as a shareware utility from Europa Software Inc. of Portland, Ore., a company run by former Now Utilities Product Manager Adrian Russell-Falla.

The utility, Web Quick, is a \$49.95 Finder-menu bookmark tool that organizes frequented URLs.

Now Utilities is priced at \$89.95; monthly updates are free from the company's Web site.

Now Software Inc. of Portland, Ore., can be reached at (503) 274-2810 or (800) 689-9427; fax (503) 222-0555; info@nowsoft.com; <http://www.nowsoft.com>.

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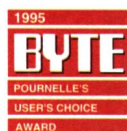
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Software distribution packs aim for LANs

By Joanna Pearlstein

Two new software distribution packages shipped recently from Power On Software Inc. and SNAP Innovation Softwareentwicklungsgesellschaft mbH.

Net Commander from Power On Software can simultaneously broadcast data to

and retrieve files from any number of clients on a network.

Net Commander costs \$60 a seat for corporations and \$30 a seat for education sites.

The SNAP Navigator from SNAP Innovation uses a SQL database for data storage. It consists of three software modules:

Navigator Server, which stores applications and settings; Navigator Admin, used to set up software distribution; and the client, used to log in and download or upload data on the client workstation. A 15-user package costs \$1,200.

Power On Software Inc. of Sherrods-

ville, Ohio, can be reached at (330) 735-3116 or (800) 344-9160; fax (330) 735-3136; poweronsw@aol.com; <http://www.poweronsw.com>.

SNAP Innovation Softwareentwicklungsgesellschaft mbH of Hamburg, Germany, can be reached at 49-40-38-02-32-70; fax 49-40-38-02-32-40; info@snap.de; <http://www.snap.de>. □

You had to look

under the hood. You simply never saw a desktop scanner

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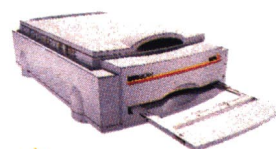
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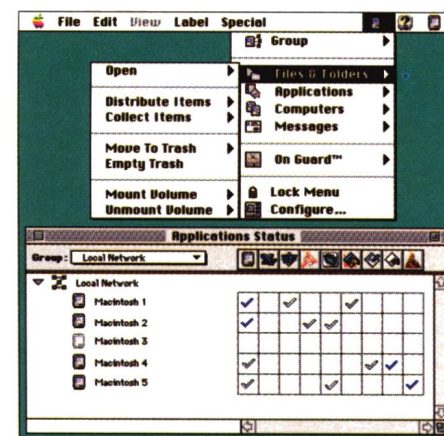
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Power On's Net Commander copies software across LANs and retrieve files from clients.

Ethernet

From Page 16

has since withdrawn those plans and instead opted to deliver its card through the OEM market starting in July.

Previous to Kingston's entry into the market, the lowest priced Fast Ethernet cards were the \$164 SMC Ether Power from Standard Microsystems Corp. of Hauppauge, N.Y., and the \$189 Fast EtherWorks PCI from Digital.

Kingston said it is able to offer its card on the cheap by cutting its margins. A spokesperson for the company said it plans to make up the difference in volume.

Fast Ethernet cards for the Intel-standard market, where unit shipments are far larger, fall in the sub-\$150 range.

Kingston Technology Corp. of Fountain Valley, Calif., can be reached at (714) 435-2600 or (800) 337-8410; fax (714) 435-2699; sales@kingston.com; <http://www.kingston.com>. □

Quarterdeck

From Page 16

following stronger-than-expected sales last quarter when a new version was released.

As a secondary cause for the company's financial woes, Quarterdeck cited slower-than-expected integration of its acquisitions, including StarNine Technologies Inc. of Berkeley, Calif., the maker of WebStar.

CEO Gaston Bastiens said he expects the company to rebound in the fourth quarter and return with profit levels above those in fiscal year 1995, when it experienced 30 percent growth and brought in \$110 million in revenues.

In related news, Quarterdeck last week acquired the remaining shares of Limbex Corp., the maker of WebCompass, an Internet client tool that Quarterdeck plans to bring to the Mac this year. The cost was about \$16 million; the buyout is expected to be completed in July. □

We must be doing

SOMETHING RIGHT!



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thrice.

MacWEEK

WOW puts Mac files on Web

By James Staten

Administrators will soon be able to use an intranet to organize Mac files, thanks to a new tool from Wide Open Workshop.

Due in July, Wide Open Web, or WOW, is a document-creation tool and browser-helper application. Using WOW, Web-

masters will be able to create links to Mac files that, when selected, launch the document in its original creator application.

With the WOW creation tool, Webmasters will select the files, folders and applications to share over the intranet. The application will create a document that

will serve as an alias to each original file. Webmasters will then be able to hyperlink those WOW files in HTML documents.

When the user clicks on a hyperlink, the WOW document will be sent to the client, where it will instruct the Finder to open the appropriate file. Pricing has not been set.

Wide Open Workshop of Seattle can be reached at (206) 364-8601; fax (206) 364-6191; info@wide-open.com; http://www.wide-open.com. □

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Internet Explorer for Macintosh is just the start. We have other products under development and are always looking for good ideas and great people. If you are a hardcore Macintosh developer driven to build world-class products, this is an opportunity you need to consider. (*whether you code, test, document, evangelize, author, or illustrate*).

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NETWORK TRAFFIC



► **Eudora bundle**

► **Tumbleweed plugs into Java**

► **WebCatalog 1.6**

Qualcomm Inc. of San Diego last week announced a bundling deal that provides its Eudora Light e-mail package with the Mac version of Internet Explorer 2.0.1, the free Web browser from **Microsoft Corp.** of Redmond, Wash. Internet Explorer for Windows has integrated e-mail features. ... **Tumbleweed Software Corp.** of Redwood City, Calif., this month updated its free Envoy plug-in for Netscape Navigator by adding interoperability with Java applets. The plug-in now lets authors embed Java applets into Envoy portable documents and view Envoy documents within Java. The plug-in is at <http://www.twcorp.com>. ...

Pacific Coast Software Inc. of San Diego updated its Web-publishing solution, WebCatalog. Version 1.6 of the \$695 database-centered product adds password security; remote administration; and conversion of special characters, such as ampersands. The search module was also updated and can now sort information in random order. ... **Ascend**

Communications Inc. of Alameda, Calif., is shipping three new remote-access switches, the MAX 2000, 4002 and 4004. The switches provide one, two and four T1 ports, respectively, and start at \$6,500. The boxes have expansion slots, for which Ascend will sell a digital modem card. ... San Jose, Calif.-based

CNet Technology Inc. created a new Internet and intranet division, which plans to unleash a host of LAN and WAN networking products. This month it will release a Fast Ethernet PCI card for \$178 as well as three multiport hubs. ... **Panamax** of San Rafael, Calif., is shipping the ModemMax, a \$99 surge protector and line conditioner for modems. The unit has six outlets and two jacks for RJ-11 or RJ-45 plugs. □

PostScript Solutions

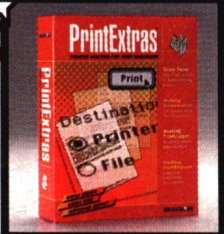
This Encapsulated PostScript (EPS) image was printed on an Apple Color StyleWriter **without** StyleScript

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Adobe PostScript

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Hardware Connectivity



PowerNexus

PowerNexus is your LocalTalk to EtherTalk hardware bridge solution. The small, lightweight bridge will connect up to four of your LocalTalk networked computers, printers or other peripherals to your 10Base-T or Thin Coax EtherTalk network.

AutoSwitch

AutoSwitch is an inexpensive, automatic switchbox which includes all necessary cabling and adapters to easily share a printer between a PC and a Mac running a version of PowerPrint.

Freedom of expression

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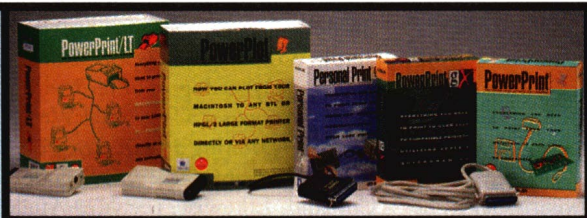
The answer, my friend, is StyleScript!

The above images were created in Illustrator, exported as EPS files into PageMaker and printed on an Apple Color StyleWriter 2500.

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A step ahead on the Web

The hottest software market in the world today is pursuing the Mac as if the platform were on fire and not in cold storage. The latest Web editor for the Mac is said to be Akimbo Systems' Globetrotter. It joins more than a half-dozen similar products scheduled for this scorching summer of product releases, and even more are coming. It's natural for Internet companies to seek a strong, early position in the Mac market. First, the Mac has a presence on the Internet disproportionate to its overall market share. Second, and more importantly, it dominates content creation for both print and multimedia. And it is from traditional print and multimedia sources that vast amounts of material on popular Web sites originate.

Apple has done virtually nothing to attract this outpouring of third-party support. Sure, QuickTime is a solid contribution to the Web infrastructure, but it's not enough of a reason to create the depth and breadth of Web products coming for the Mac. We may be seeing instead the beginning of a content-development

standard with the Mac at its center.

To say this is good news is an understatement. With every platform company practically begging and bribing developers to write programs for its products, having them flock virtually unbidden to the Mac is a wonderful endorsement.

But it's not all peaches and cream for Apple's Internet evangelists. The company lost market share in the multimedia market last year, according to Dataquest Inc. And with Apple setting very low expectations for the year ahead, we might see a concomitant loss in the publishing arena.

Apple must capitalize now on its undisputed top position in content creation to continue to attract hot, new Web-oriented products. Third-party developers who think about content as the way to Web riches will certainly buy Macs by the truckload, just as print publishers have done for a decade. Better, they will create a new standard for content creation that uses the Mac OS to embrace print, multimedia and the Web. □

THE SECOND DECADE HENRY NORR

Buffing up the OS can put the squeeze on developers

The controversy is as old as the Mac itself, but it shows no sign of going away. If it isn't managed with the delicacy it demands, it could undermine the efforts of Apple CEO Gilbert Amelio's administration to improve relations with third-party developers. The issue: What kind of Mac software should Apple offer its customers? And what should be left for third parties to provide?

In 1984 and 1985 the debate had a narrow focus: to bundle or not to bundle MacWrite and MacPaint. Today it has multiple dimensions, encompassing (among other things) Apple's policy of bundling Claris Corp. and third-party titles with many systems, as well as its practice of competing against its developers with rainbow-branded products such as At Ease, the Apple Media Tool and now the Apple Network Administrator Toolkit.

The most contentious aspect of the problem involves the Mac OS itself: Is Apple

really bolstering its platform by continually building new features and functions into its operating system, even when independent developers already offer top-notch add-ons in the same categories?

Raising the bar

The easy answer is: "Of course." Consider some of the initiatives Apple disclosed at last month's Apple Worldwide Developers Conference: making Cyberdog standard equipment; giving every user a "personal Web server;" and incorporating a new, post-PowerTalk mail system into Mac OS 8, code-named Copland. Likewise, reviving AppleScript and HyperCard will help differentiate the Mac from Microsoft Windows.

But if you are selling or planning competing products, the news may not sound so good. Since WWDC, I've heard from third-party developers with software that competes, directly or indirectly, with each

of the Apple initiatives mentioned above. Some of them are angry, others philosophical. But all said they may scale back their investment in these projects.

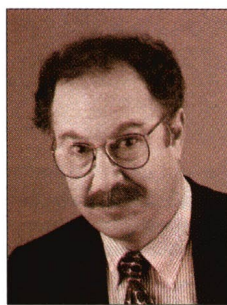
Facing reality

On one level, developers are simply facing risks that go with the territory: User demands and competitive pressures have always forced OS providers to keep adding new features; third-party pioneers have often had to choose between swimming out of the way or being swamped in the mother ship's wake.

Microsoft Corp. plays this game ruthlessly, and Apple doesn't have the freedom to opt out of it. On the other hand, Apple can ill afford to discourage any third party — especially considering that those who've led where it now wants to follow are often among its most dynamic developers.

The challenge for Apple is to manage the problem in a way that balances its interests, those of its developers and, above all, their mutual customers. Apple Vice President Heidi Roizen is working on guidelines. Don Crabb has already presented a culinary perspective on the problem (http://www.zdnet.com/macweek/mw_1023/opinion_crabb.html). Soon, my thoughts, using AppleScript as a case study. □

Henry Norr, editor emeritus of MacWEEK, welcomes feedback in the MacWEEK forums on CompuServe or at henry_norr@macweek.com.





LETTERS

Rose-colored rah-rah

Stephen Howard was definitely wearing shades, strongly rose-colored (06.10.96, Page 3). I thought he was in the news business, not the business of cheerleading vaporware.

There's nothing in AppleShare's history since I first used AppleShare 1.0 in the late 1980s that indicates Apple is capable of meeting the feature set it is going on about. We're talking about the company that took two years to knock off Glenn Anderson's MacDNS; the company that still hasn't put AppleShare 4.2.1 on the price list despite its announcement to do so six months ago. Somewhere I have a copy of a list of either AppleShare's 3.0 or 4.0 proposed features that promised to do so much. Of course, they never did.

Heck, I wrote MacWEEK's reviews of AppleShare 2.0 and 3.0 way back when, and there hasn't been a single feature enhancement other than performance since. And most of the performance has come from a lot of buggy caching strategies that have caused many longtime AppleShare managers to walk away from the 4.1 and 4.2 releases in disgust.

The facts are AppleShare has lost market share big time. The product is on life support. That's the view from my window, and I can see commercial sites as well as education from here.

Most of FutureShare's proposed features sound a lot like an Apple version of Quarterdeck Corp.'s WebStar and Peter Lewis' NetPresentz. Nobody needs Apple to make knockoffs of excellent third-party products. What people need from FutureShare is what third parties can't do: an IP AppleShare client and faster file system access. I wish Apple would concentrate its resources on getting the core stuff right for once. The rest is marketing smoke. Remember not to inhale when you're in a room full of it.

Dan Magorian

Senior Macintosh network specialist
University of Maryland at College Park
College Park, Md.

The big unknown

We're very happy with our relationship with Apple on the AISS (Apple Internet Server Solution), and we expect to continue working very closely with them on future solutions. It's way too early to tell what the impact of FutureShare will be since Apple hasn't shipped it; OpenDoc is such a big unknown, with ship dates and feature sets that are subject to change.

The big growth in the future, though, will not be in dedicated server solutions, such as FutureShare, but in distributed intranets

with lots of desktop Web servers performing specific tasks for individuals and groups.

David Thompson, senior product manager
Internet Server Products
Quarterdeck Corp., Berkeley, Calif.

Why wait?

Why does MacWEEK spend time applauding moves by Apple that everyone knows are wrong? For example, Matthew Rothenberg says that Apple delayed Copland "for the right reasons" (04.29.96, Page 3) when the rest of us see it as an act of total idiocy. Apple has delayed Copland to integrate Internet software that already exists. Most of us realize that Apple is going to recreate substandard versions of existing Internet solutions, then bundle them with Copland under the guise of "integration." And for this we get to wait another year?

Kyle Maxwell, systems analyst
Zepol D. Falo Consulting Inc.
St. George, Utah

Stabbing back

The Mac the Knife gossip column is a discredit to an otherwise solid trade publication. And, in my opinion, it insults the intelligence of what I assume to be a sophisticated readership.

Responsible journalism reports facts and lets the readers reach their own opinions. To write that Synchronys Softcorp "inspired much fear" on the Wintel side is baseless sensationalism, period (05.20.96, Page 78). To characterize a product as "arguably fraudulent" rather than clearly defective as the company had announced is an arguably libelous cheap shot.

Synchronys Softcorp has taken responsibility for bringing its SoftRAM95 product to market too soon last year. The market will be the final arbiter of the quality of the several new products we will be launching this year, including SoftRAM96 and a line of performance-enhancing programs for the Mac platform. Synchronys Softcorp, however, stood behind its product and offered full refunds to customers who were dissatisfied, which is far more than MacWEEK does for a dubious issue of its magazine.

Rainer Poertner
CEO

Synchronys Softcorp, Culver City, Calif.

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Send letters to MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105; fax (415) 243-3651. We can be contacted online: CompuServe, 76077,1351; Internet, letters@macweek.com. Include your name, address and phone number. We reserve the right to edit for clarity and length.

THE MAC MANAGER DON CRABB

It'll take more than \$20M to 'bribe' Mac developers

As you may know, one of the most notable announcements at last month's Apple Worldwide Developers Conference was the \$20 million bag of cash that Heidi Roizen, vice president of developer relations, got from CEO Gilbert Amelio to energize and support Apple developers. Exactly how that money will be spent and what it can buy, though, is still up in the air.

Not for the lack of suggestions — ranging from merely harebrained to pure chutzpah — from seemingly every developer, developer's friend or anyone who can spell d-e-v-e-l-o-p-e-r. Now it's my turn.

It ain't enough

First of all, there are lots of good ways Apple can spend this money: Eliminating all Developer Relations membership fees to attract more small developers. Selling hardware to developers at cost. Providing special support programs for education, corporate and small-business developers building intranet and Internet applications. Identifying key third-party partners and co-marketing their products. And cutting new deals with Apple's largest commercial developers that showcase Mac-derived technologies and solutions.

Frankly, my biggest concern with the \$20 million investment isn't that Apple can't spend it, but that by the time Apple figures out just which projects and developers it ought to throw money at, the kitty will be empty. Indeed, \$20 million isn't enough.

The first and easiest thing Apple needs to do is put more money in the kitty. As Henry Norr has said, this is no time to be timid. Heidi's developers piggy bank should have something like \$100 million in it. Apple recently sold \$600 million in

bonds; this would be an ideal way to use some of that cash.

Mac-first, Mac-only bribery

Not only would \$100 million accommodate more developers funding ideas, it would also allow Apple to spend enough money on enough of them to make a discernible difference. Especially if Roizen earmarks a big chunk for "bribing" key developers to build Mac-first, Mac-only products.

That's right. Mac-first, Mac-only. In short, more reasons for buying and using Macs other than: "We're just as cheap as the Wintel clones," or "Look, we run the same software as the Wintel clones."

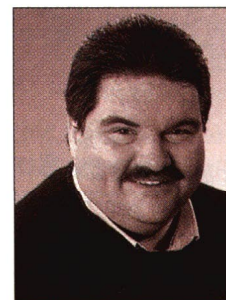
Wooo, pinch me, I must be dreaming. Those are sure compelling reasons to go Mac. Not!

Look folks, the rhapsodizing about interoperability has got to stop. Cross-platform baloney needs to be shown for the nonsense that it is. Who wants products that have been designed to work on both the Mac and Wintel from the moment of their inception? Do you *really* want generic products that take advantage of neither the Mac nor Windows? I doubt it.

Let the best applications find their homes first on the Mac, then migrate to Wintel, if that's their natural path. There will always be good companies that know how to take a great Mac program to Windows while keeping it intact. But most developers can't or won't, and we shouldn't expect them to.

Repeat after me: Mac first. Mac only. □

Don Crabb welcomes comments at his Internet address decc@cs.uchicago.edu. You can also check out his home page at <http://cs-www.uchicago.edu/~decc/>.



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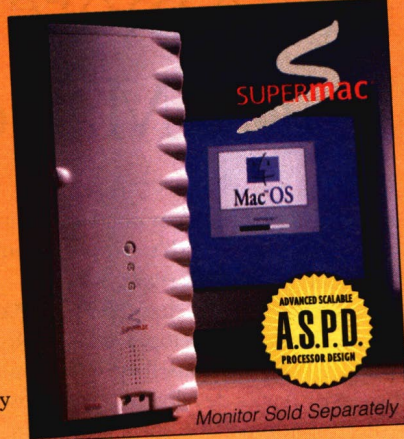
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MICRONET Advantage 1GB "Jaz" disk	116.38
MICRONET 4X CD-ROM Kit with 5 titles	283.10
SYQUEST EZFlyer 230MB external	286.85
SYQUEST EZFlyer 230MB cartridge	29.47
SYQUEST EZ135 external SCSI	199.99
SYQUEST 135MB EZ135 cartridge	19.45

Input Devices

ADESSO Soft Touch Plus extended keyboard	47.92
ADESSO Tru-Form extended keyboard	84.76
AGFA Arcus II with full version Adobe Photoshop	1995.00
AGFA StudioScan IIsi	698.32
ALPS Desktop GlidePoint	69.84
ALPS GlidePoint Keyboard	115.48
CONNECTIX Color QuickCam digital video camera	223.11
EPSON ES-1000C color flatbed scanner	737.82
EPSON ES-1200C ProMAC color flatbed scanner	1122.02
MICROTEK ScanMaker E3	379.77
NIKON Super CoolScan film scanner	1943.58
NIKON LS-20 Super CoolScan II	1165.32
RELISYS Scorpio Infinity	401.52
UMAX Vista-S6 SOHO	389.23
UMAX Vista-S12 MACPRO2	638.53
VISIONEER SCSI Adapter for PaperPort VX	65.48
VISIONEER PaperPort VX	274.94

Memory Upgrades

SIMPLE TECHNOLOGY Power Mac 9500 8500 7600 7500 8MB	135.33
SIMPLE TECHNOLOGY Power Mac 9500 8500 7600 7500 16MB	249.77
VISIONTEK Power Mac 9500 8500 7600 7500 32MB	465.31
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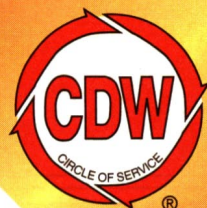
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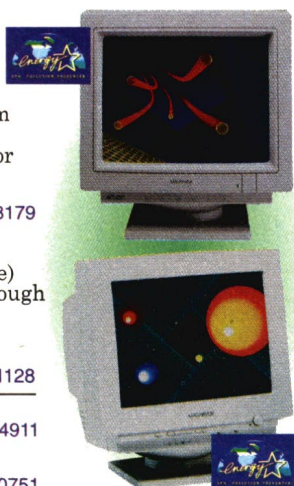
CDW 61128

MagnaScan/17

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MagnaScan/20

20" color display (19" viewable image size) .. **\$1013.19** CDW 20751



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ADOBE Illustrator V6.0 upg 5.X to 6.0 (CD only) ..	89.96
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ADOBE PageMaker V6.0 upgrade	132.81
ADOBE PageMill V1.0	88.65
ADOBE Photoshop V3.0.5	545.78
ADOBE Photoshop V3.0.5 version upgrade	59.55
ADOBE Type Manager V3.8	39.18
CAERE OmniPage Pro V6.0	459.02
CAERE OmniPage Pro V6.0 upgrade	134.70
CASADY & GREENE Conflict Catcher 3	58.61
CLARIS AppleLink Internet Connection Kit V1.1 ..	45.17
CLARIS Emailer	41.73
CLARIS FileMaker Pro V3.0	179.14
CLARIS FileMaker Pro V3.0 upgrade	91.95
CONNECTIX RAM Doubler/Speed Doubler bundle ..	74.28
FRACTAL DESIGN Painter V4.0	282.33
FRACTAL DESIGN Painter V4.0 upgrade	122.16
FRACTAL DESIGN Poser V1.0	85.92
FWB CD-ROM Toolkit™ V2.0	49.88
FWB Hard Disk Toolkit™ V1.8	117.28
INSIGNIA SoftWindows 95 CD	321.60
INSIGNIA SoftWindows 95 upg CD	139.27

INSIGNIA SoftWindows V3.0 CD	287.05
INSIGNIA SoftWindows V3.0 upgrade CD	67.02
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MACROMEDIA Director V5.0 upgrade CD	374.37
MACROMEDIA FreeHand V5.5 CD	378.33
MACROMEDIA FreeHand V5.5 upgrade V5.0 to V5.5 CD ..	74.84
METATOOLS Bryce V2.0 CD	58.82
METATOOLS Kai's Power Tools 3 CD	111.41
METROWERKS CodeWarrior Gold 9	303.27
MICROSOFT Office V4.2.1	449.03
MICROSOFT Office V4.2.1 upgrade, CD	449.31
MICROSOFT Office V4.2.1 upgrade	265.86
MICROSOFT Office V4.2.1 upgrade, CD	265.72
MICROSOFT Visual FoxPro V3.0 CD	439.60
MICROSOFT Visual FoxPro V3.0 upgrade, CD	265.72
NOW Contact/Up to Date V3.6 bundle CD	63.15
NOW Utilities V6.0 CD	77.12
QuarkXPress V3.32 CD	639.11
STRATA Vision 3D V4.0	229.95
SYMANTEC ACT! V2.5	148.18
SYMANTEC Cafe	89.68
SYMANTEC Norton Utilities V3.2	94.27
SYMANTEC SAM AntiVirus V4.0	64.17
SYMANTEC Suitcase V3.0	65.43

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Amazing where you'll find PowerBooks these days. On the road. In the air. At the beach. Everywhere.

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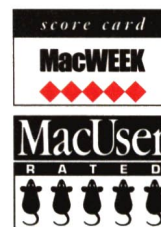
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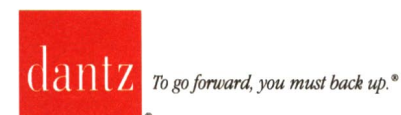
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☐ 01. Yes ☐ 02. No

1 What is your organization's primary business activity at this entire location? (Select one only) Write Answer Here →

- | | | |
|--|---|---|
| Non-Computer Related | 12. Manufacturing | Computer Related |
| 01. Graphic Arts | 13. Education: College/University/Trade | 22. Manufacturer (Computers, Software, Peripherals) |
| 02. Publishing | 14. Education: High School/Elementary | 23. VAR, VAD, Systems/Network Integrator |
| 03. Advertising, Public Relations, Promotion | 15. Finance: Banking, Accounting, Insurance, Real Estate, Legal | 24. Retailer/Distributor |
| 04. Digital Media Development | 16. Health, Medical | 25. Systems House/Data Processing Service |
| 05. Entertainment/Broadcast | 17. Non-Computer Retailer, Wholesaler, Distributor | 26. Computer Consultant |
| 06. Commercial Printer | 18. Research and Development | 27. Other Businesses and Services |
| 07. Service Bureau/Pre-Press | 19. Agriculture, Mining, Construction, Oil | 99. Other (please specify) |
| 08. Aerospace | 20. Transportation, Utilities | |
| 09. Architecture, Engineering | | |
| 10. Telecommunications | | |
| 11. Government | | |

2 What is your job function? (Select one only) Write Answer Here →

- | | | |
|-----------------------------------|---|--|
| A. Networking/Data Communications | J. Communications/Publishing/Public Relations/Advertising | O. Administration/Management/Personnel |
| B. MIS/DP/Information Systems | K. Engineering/Architecture | P. Accounting/Finance/Legal |
| C. Systems Engineering | L. Science/Research & Development | Q. Sales/Marketing |
| D. Internet/WWW Site Development | M. Education/Training/Development | R. Purchasing |
| E. Telecommunications | N. Manufacturing/Operations/Production/Quality Control | S. Consulting |
| F. Graphic Arts/Design | | Z. Other (please specify) |
| G. Production/Pre-Press | | |
| H. Video Production | | |
| I. Audio Production | | |

3 Which of the following brands of systems and/or applications software do you have installed at this entire location? (Check all that apply)

- | | | |
|---|---|---|
| Operating Systems | Groupware | On-Line Services |
| ☐ 01. System 7 or higher | ☐ 16. Lotus Notes | ☐ 31. America Online |
| ☐ 02. Unix/Xenix/AUX/AIX | ☐ 17. Windows for Workgroups | ☐ 32. CompuServe |
| ☐ 03. Windows 3.x | ☐ 18. FirstClass | ☐ 33. Prodigy |
| ☐ 04. Windows NT | ☐ 19. Novell GroupWise | ☐ 34. Internet |
| ☐ 05. Windows 95 | ☐ 20. Other (please specify) | ☐ 35. Other (please specify) |
| ☐ 06. NeXTStep | | Internet Services |
| ☐ 07. Solaris | | ☐ 37. NetCom |
| ☐ 08. Other (please specify) | | ☐ 38. EarthLink |
| Network Operating Systems | Database Engines | ☐ 39. PSI |
| ☐ 10. Novell NetWare | ☐ 22. FileMaker | ☐ 40. BEST |
| ☐ 11. Unix/NFS | ☐ 23. Oracle | ☐ 41. AT&T Worldnet |
| ☐ 12. Banyan VINES | ☐ 24. Sybase SQL Server | ☐ 42. BBN |
| ☐ 13. AppleShare | ☐ 25. Ingres | ☐ 43. GNN |
| ☐ 14. DEC PathWorks | ☐ 26. Informix | ☐ 44. Other (please specify) |
| ☐ 15. Other (please specify) | ☐ 27. 4D Server | |
| | ☐ 28. DB2 | |
| | ☐ 29. Other (please specify) | |

4 Please indicate the quantities of the computers currently installed and indicate the computers planned for purchase in one year at this entire location.

	Currently Installed (Quantity)	PLAN TO PURCHASE
Macintosh/Compatible		
Apple Power Mac 8500, 9500	1.	1. ☐
Apple Power Mac 7500, 7600	2.	2. ☐
Apple Power Mac 7200	3.	3. ☐
Apple Nu-Bus Based Power Mac	4.	4. ☐
Power Computing	5.	5. ☐
Daystar Digital	6.	6. ☐
Other Power Mac Compatible	7.	7. ☐
Macintosh Quadra, Centris	8.	8. ☐
Macintosh Performa	9.	9. ☐
Non PPC Mac PowerBook/Duo	10.	10. ☐
PPC Mac PowerBook/Duo	11.	11. ☐
Macintosh Other (II, LC, SE, etc...)	12.	12. ☐
Other Mac Compatible	13.	13. ☐
Other Desktops		
Intel/Compatible Desktop/Laptop/Notebook	14.	14. ☐
PowerPC (Non-Mac Compatible)	15.	15. ☐
Workstation (SPARC, MIPS, HP/Apollo, etc.)	16.	16. ☐
Other Microcomputers	17.	17. ☐

5A How many servers are installed at this entire location? (Use numbers only)

5B How many LANs are installed at this entire location? (Use numbers only)

5C How many Macintoshes are connected to the LANs indicated in Question 5B above? (Use numbers only)

6A Does this location retail, resell, distribute, or function as a professional consultant for Macintosh-related products or services? ☐ YES ☐ NO

6B If you indicated YES in question 6A above, which of the following product or service categories are sold, resold, distributed or recommended at this entire location? (Check all that apply)

- | | |
|---|---|
| ☐ 01. Host Systems (Mainframes/Minis) | ☐ 04. Peripheral Equipment |
| ☐ 02. Desktops/Portables (Micros/Workstations) | ☐ 05. Software Products |
| ☐ 03. Networking Products (include Servers) | ☐ 06. Service/Support |

7A Which of the following Macintosh-related products do you specify, recommend, buy or approve the purchase of? (Check all that apply)

- | | | |
|--|---|--|
| Systems | ☐ 20. Communication/Network Software | ☐ 41. Presentation Systems |
| ☐ 01. Apple Macintoshes | ☐ 21. Bridges/Routers/Gateways | |
| ☐ 02. Mac Compatibles | ☐ 22. Hubs | Peripherals |
| ☐ 03. Intel Compatible Micros | ☐ 23. NICS | ☐ 43. UPS |
| ☐ 04. Intel Servers | | ☐ 44. External Speakers |
| ☐ 05. Workstations | Printers | ☐ 45. Input Devices |
| ☐ 06. Minis/Mainframes | ☐ 25. Laser | ☐ 46. Video Deck |
| ☐ 07. PDAs | ☐ 26. Color Laser | ☐ 47. MIDI |
| ☐ 08. Pen-Based Computers | ☐ 27. InkJet | |
| | ☐ 28. Image Setter | Storage |
| | ☐ 29. Dye Sub | ☐ 49. Removable Storage |
| Networking/Internet | ☐ 30. Thermal Wax | ☐ 50. Magneto Optical |
| ☐ 10. Internet Servers/Web Servers | ☐ 31. Plotter | ☐ 51. RAID |
| ☐ 11. Mac Compatible | | ☐ 52. Hard Drive 1 Gig + |
| ☐ 12. Intel Compatible | Image Input | ☐ 53. Hard Drive < 1 Gig |
| ☐ 13. Workstations | ☐ 33. Digital Camera | ☐ 54. CD Recorder |
| ☐ 14. LANs | ☐ 34. Flatbed Scanners | |
| ☐ 15. WANs | ☐ 35. Handheld Scanners | Add-In Boards |
| ☐ 16. Mac to PC Links | ☐ 36. Slide Scanners | ☐ 56. Memory Boards |
| ☐ 17. Mac to Mini/Mainframe Links | ☐ 37. Drum Scanners | ☐ 57. Display Boards |
| ☐ 18. Mac to Unix Workstation Links | | ☐ 58. Accelerator Boards |
| ☐ 19. Modems | Displays | ☐ 59. Video Capture/Compression |
| | ☐ 39. 14 - 17 inch | ☐ 99. None of the above |
| | ☐ 40. 19 + inch | |

*** Indicate additional individuals at this location who might qualify for a FREE subscription to MacWEEK:**

Name	Title
Name	Title
Name	Title

7B Which of the following systems and/or applications software do you specify, recommend, buy or approve the purchase of? (Check all that apply)

- | | | |
|---|---|---|
| Graphic Arts/Publishing | ☐ 23. VRML Authoring Tools | ☐ 42. Databases |
| ☐ 01. Desktop Publishing | ☐ 24. Web Publishing Tools | ☐ 43. Project Management |
| ☐ 02. Electronic Publishing | ☐ 25. Firewalls/Security | ☐ 44. Accounting/Payroll |
| ☐ 03. Painting/Drawing Programs | ☐ 26. Transaction Processing | ☐ 45. Groupware |
| ☐ 04. Photo Retouching | ☐ 27. Database Connectivity | ☐ 46. Desktop Video Conf. |
| ☐ 05. Page Layout | ☐ 28. Other (please specify) | ☐ 47. Document Management |
| ☐ 06. Illustration Programs | | ☐ 48. Mapping/GIS |
| ☐ 07. Fonts | | ☐ 49. Pen-Based Applications |
| ☐ 08. Pre-Press | | ☐ 50. Other (please specify) |
| ☐ 09. Color Management | Presentation Graphics | |
| ☐ 10. Digital Video | ☐ 30. Presentation Software | Systems Management |
| ☐ 11. Other (please specify) | ☐ 31. Multimedia Presentations | ☐ 52. Operating Systems |
| Multimedia | ☐ 32. Charting Program | ☐ 53. Utilities |
| ☐ 13. Authoring Software | ☐ 33. Other (please specify) | ☐ 54. Applications Development |
| ☐ 14. Video Editing | | ☐ 55. CASE |
| ☐ 15. Sound Editing | | ☐ 56. Programming Languages |
| ☐ 16. Music Composition/Editing | Design/Engineering | ☐ 57. Compilers |
| ☐ 17. Animation | ☐ 35. CAD/CAM | ☐ 58. SQL Applications |
| ☐ 18. Clip Media (Sound and Art) | ☐ 36. 2/D - 3/D Modeling | ☐ 59. Client Server Applications |
| ☐ 19. Other (please specify) | ☐ 37. Simulation | ☐ 60. Other (please specify) |
| | ☐ 38. Other (please specify) | ☐ 99. None of the above |
| Internet/WWW | Business Applications | |
| ☐ 21. Browsers | ☐ 40. Word Processing | |
| ☐ 22. HTML Authoring Tools | ☐ 41. Spreadsheets | |

8 In which ways do the Macintoshes at your location connect to the Internet? (Check all that apply)

- | | |
|---|---|
| ☐ 01. Analog Modems | ☐ 05. ATM |
| ☐ 02. ISDN | ☐ 06. Wireless Modems |
| ☐ 03. T-1/T-3/Fractional T-1 | ☐ 09. Other (please specify) |
| ☐ 04. Cable Modems | |

9 If you indicated purchase involvement for computers, computer products or services in Question 7A or Question 7B, for how many Macintoshes do you have this involvement? (Select one only) Write Answer Here →

- | | | | | |
|---------------|-------------|-----------|-----------|----------|
| 01. 2000+ | 03. 500-999 | 05. 50-99 | 07. 10-19 | 09. 1-4 |
| 02. 1000-1999 | 04. 100-499 | 06. 20-49 | 08. 5-9 | 99. None |

10 For what applications are the Macintoshes at your location used? (Check all that apply)

- | | |
|--|---|
| ☐ 01. Graphic Arts/Publishing | ☐ 05. Business Applications |
| ☐ 02. Presentation Graphics | ☐ 06. Systems Management |
| ☐ 03. Multimedia | ☐ 07. Internet Development |
| ☐ 04. Design/Engineering | ☐ 99. Other (please specify) |

11 Over the course of one year, do you specify, recommend, buy, sell, resell or approve the purchase of host systems, desktops, networking products, peripheral equipment and/or software worth: (Check one box per column)

	Host Systems (Mainframe/Minis)	Desktop/Portables (Micros/Workstations)	Networking Products (include Servers)	Peripheral Equipment	Software Products	Service/Support
\$10,000,000 or more	1. ☐	14. ☐	27. ☐	40. ☐	53. ☐	66. ☐
\$5,000,000 to \$9,999,999	2. ☐	15. ☐	28. ☐	41. ☐	54. ☐	67. ☐
\$2,500,000 to \$4,999,999	3. ☐	16. ☐	29. ☐	42. ☐	55. ☐	68. ☐
\$1,000,000 to \$2,499,999	4. ☐	17. ☐	30. ☐	43. ☐	56. ☐	69. ☐
\$600,000 to \$999,999	5. ☐	18. ☐	31. ☐	44. ☐	57. ☐	70. ☐
\$400,000 to \$599,999	6. ☐	19. ☐	32. ☐	45. ☐	58. ☐	71. ☐
\$200,000 to \$399,999	7. ☐	20. ☐	33. ☐	46. ☐	59. ☐	72. ☐
\$100,000 to \$199,999	8. ☐	21. ☐	34. ☐	47. ☐	60. ☐	73. ☐
\$50,000 to \$99,999	9. ☐	22. ☐	35. ☐	48. ☐	61. ☐	74. ☐
\$25,000 to \$49,999	10. ☐	23. ☐	36. ☐	49. ☐	62. ☐	75. ☐
\$10,000 to \$24,999	11. ☐	24. ☐	37. ☐	50. ☐	63. ☐	76. ☐
Less than \$10,000	12. ☐	25. ☐	38. ☐	51. ☐	64. ☐	77. ☐
None of the above	13. ☐	26. ☐	39. ☐	52. ☐	65. ☐	78. ☐

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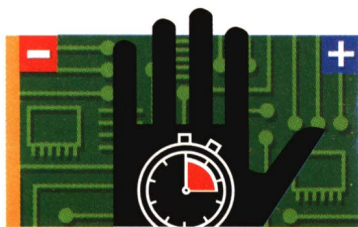
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REVIEWS

WHY NOT FASTER?

Apple and board vendors give their spin on our Fast Ethernet results. See <http://www.macweek.com/reviews.html>.

MACWEEK 06.24.96

Evaluations • Benchmarks • Testing

PAGE 27

COMPARISON

Performance gains moderate with new Fast Ethernet

By Jonathan A. Oski

Network managers seeking to breathe new life into their tired Ethernet networks are looking to Fast Ethernet (100BASE T) to improve network performance.

With this in mind, we compared a variety of Macintosh NuBus and PCI Fast Ethernet adapters. Also, since Mac networking architecture has undergone some dramatic changes lately because of Open Transport 1.1, we wanted to see how Open Transport's AppleTalk fared

100BASE T almost doubles Ethernet's throughput but still falls short of its potential.

against classic AppleTalk.

The market for Fast Ethernet products is growing fast and furiously. If you have the right type of cabling installed, migrating from 10BASE T Ethernet to 100BASE T Fast Ethernet can be as simple as swapping your network adapter and hub. All the cards we tested were 10/100 cards, meaning they supported both 10-Mbps Ethernet and 100-Mbps Fast Ethernet. (But "10-Mbps" and "100-Mbps"

are misnomers, as neither network technology can ever get as fast as the respective names imply.) This allows you to upgrade the interface cards in your workstations and servers before replacing the hubs. Most cards also support autosensing, so they will immediately adapt to the speed of the hub port to which they are connected.

We tested cards from Asanté Technologies Inc.; Dayna Communications Inc.; Digital Equipment Corp.; Farallon Communications Inc.; RNS, a division of Meret Communications Inc.; Standard Microsystems Corp. and Sonic Systems Inc. (see chart below). We evaluated PCI adapters from all these companies and NuBus cards from Asanté, Dayna, Farallon and Sonic.

Prices range from \$164 for Standard Microsystems' PCI card to \$399 for three of the four NuBus cards. (The NuBus Fast Ethernet cards are significantly more expensive, most likely because PCI cards

work in both Macs and Intel-standard PCs, yielding higher potential sales volume and lower manufacturing costs.)

Overall, we found that 100BASE T can offer almost double the throughput of built-in Ethernet — a decent improvement but still far short of Fast Ethernet's potential for several orders of performance increase. This situation should improve as Apple and other vendors deliver more native PowerPC code and native Power Mac applications.

The racetrack

Our goal was to gauge the performance of PCI and NuBus Fast Ethernet adapters in a variety of situations. We also sought to determine the magnitude of the performance gains Fast Ethernet offers over the Mac's built-in Ethernet, to find the differences between Open Transport 1.1's AppleTalk and classic AppleTalk, and to see how Fast

See Comparison, Page 28



Fast Ethernet cards/NetBench

The AsantéFAST 10/100 Adapter vastly outperformed all other NuBus cards when using Classic AppleTalk. Among PCI cards, adapters from Asanté, DEC, Farallon, RNS and Sonic nearly doubled the throughput of standard Ethernet.

32-Kbyte block transfer

NuBus cards	Longer is better	Mbps
AsantéFAST 10/100 (CA)*		9.38
AsantéFAST 10/100		6.18
Dayna BlueStreak 10/100 NuBus		5.94
Farallon Fast Ether TX-10/100		4.15
Sonic EtherFE 10/100		5.77
Built-in Ethernet on 8100/100 (CA)*		5.85
Built-in Ethernet on 8100/100		4.51

PCI cards	Longer is better	Mbps
AsantéFAST 10/100		9.17
Dayna BlueStreak 10/100 PCI		4.21
Digital FASTEtherWORKS		9.07
Farallon Fast Ether TX-10/100		8.44
RNS 2300-TX		8.45
SMC Ether Power 10/100		5.21
Sonic EtherFE 10/100		9.26
Built-in Ethernet on 7500/100		4.89

Test configuration: NuBus cards were tested on a Power Mac 8100/100; PCI cards were tested on a Power Mac 7500/100. Both Macs had 16 Mbytes of RAM, System 7.5.3, 32-Kbyte cache, virtual memory off, modern memory manager on, AppleTalk on, monitors set to 256 colors. All tests used Open Transport 1.1 as the default network driver except where noted. We used only the vendor-supplied driver for each card.

Tests were run over AppleTalk through an Intel IntelExpress 100BaseTX hub to a Compaq ProLiant server running Novell NetWare 4.1. The server had 64 Mbytes of RAM and an NE 3200 Fast Ethernet adapter. Tests of built-in Ethernet were conducted using an Asanté 10T Hub.

*Used Classic AppleTalk as default network driver.

Fast Ethernet NuBus, PCI cards

COMPANY	PRODUCT	OVERALL VALUE	PRICE
ASANTÉ TECHNOLOGIES INC. San Jose, Calif. (408) 435-8388 or (800) 622-7464 fax (408) 432-1117 http://www.asante.com	AsantéFAST 10/100 Adapter for NuBus AsantéFAST 10/100 Adapter for PCI	◆◆◆◆ ◆◆◆◆◆	\$399 \$239
DAYNA COMMUNICATIONS INC. Salt Lake City (801) 269-7200 or (800) 531-0600 fax (801) 269-7363 http://www.dayna.com	BlueStreak 10/100 NuBus BlueStreak 10/100 PCI	◆◆◆◆ ◆◆◆◆◆	\$399 \$259
DIGITAL EQUIPMENT CORP. Maynard, Mass. (800) 344-4825 http://www.digital.com	Fast EtherWorks PCI	◆◆◆◆◆	\$189
FARALLON COMMUNICATIONS INC. Alameda, Calif. (510) 814-5000 fax (510) 814-5023 http://www.farallon.com	Fast Ether TX-10/100 (NuBus) Fast Ether TX-10/100 (PCI)	◆◆◆◆ ◆◆◆◆◆	\$319 \$199
RNS, A DIVISION OF MERET COMMUNICATIONS INC. Santa Barbara, Calif. (805) 968-4262 or (800) 262-2290 fax (805) 968-6478 http://www.rns.com	RNS 2300-TX (PCI)	◆◆◆◆◆	\$245
STANDARD MICROSYSTEMS CORP. Hauppauge, N.Y. (516) 435-6000 or (800) 762-4968 fax-back (800) 762-8329 http://www.smc.com	SMC Ether Power 10/100 (PCI)	◆◆◆◆◆	\$164
SONIC SYSTEMS INC. Sunnyvale, Calif. (408) 736-1900 or (800) 535-0725 fax (408) 736-7228 http://www.sonicsys.com	Sonic EtherFE 10/100 NuBus Sonic EtherFE 10/100 PCI	◆◆◆◆ ◆◆◆◆◆	\$399 \$249

Key ◆◆◆◆◆ Excellent ◆◆◆◆◆ Very good ◆◆◆◆ Good ◆◆◆ Fair ◆ Unsatisfactory



Fast Ethernet cards/FTP

The PCI cards bettered their NuBus counterparts by at least 25 percent in many cases and Open Transport surpassed Classic AppleTalk by a slight margin. Digital's Fast EtherWORKS PCI card was a standout.

Fetch/FTP 10-Mbyte file copy

NuBus cards	Shorter is better	Seconds
AsantéFAST 10/100 (CA)*		43.28
AsantéFAST 10/100		38.58
Dayna BlueStreak 10/100 NuBus		37.11
Farallon Fast Ether TX-10/100		49.02
Sonic EtherFE 10/100		38.15
Built-in Ethernet on 8100/100 (CA)*		45.31
Built-in Ethernet on 8100/100		37.74

PCI cards

AsantéFAST 10/100		28.53
Digital FASTETHERWORKS		14.08
Farallon Fast Ether TX-10/100		28.04
RNS 2300-TX		27.85
SMC Ether Power 10/100		27.96
Sonic EtherFE 10/100		26.36
Built-in Ethernet on 7500/100		29.31

Test configuration: NuBus cards were tested on a Power Mac 8100/100; PCI cards were tested on a Power Mac 7500/100. Both Macs had 16 Mbytes of RAM, System 7.5.3, 32-Kbyte cache, virtual memory off, modern memory manager on, AppleTalk on, monitors set to 256 colors. All tests used Open Transport 1.1 as the default network driver except where noted. We used only the vendor-supplied driver for each card.

Tests were run over AppleTalk through an Intel IntelExpress 100BaseTX hub to a Compaq ProLiant server running Novell NetWare 4.1. The server had 64 Mbytes of RAM and an NE 3200 Fast Ethernet adapter. Tests of built-in Ethernet were conducted using an Asanté 10T Hub.

*Used Classic AppleTalk as default network driver.

**Dayna's BlueStreak 10/100 PCI was unable to complete this test, as a bug in Dayna's software causes the Mac to hang when transferring a heavy stream of data. Dayna promises a fix soon.

PC outruns Mac in tests

To compare Fast Ethernet performance on Macs and PCs, we set up an Intel Pentium-based workstation with an AsantéFAST 10/100 adapter for PCI and ran NetBench 4.01. The PC was a 100-MHz Compaq Deskpro XL 5000 with 16 Mbytes of RAM and a 1-Gbyte drive, similar to the Mac configurations we tested.

At first glance the results are nothing less than striking. Throughput for the PC ranged from close to 20 Mbps in the 1-Kbyte block tests to slightly more than 40 Mbps in the 32- and 64-Kbyte block tests. A Power Mac 7500/100 with the same Asanté card reached speeds only just below 10 Mbps.

But there's more to the story. As noted in our main review, NetBench itself may introduce some

slowdowns to Mac network performance because it is not Power Mac-native (see review below). Further, the two platforms are using different network protocols (IPX for the PC and AppleTalk for the Mac).

In tests where the Mac software is optimized, the disparity between Mac and PC was smaller. Copying a 10-Mbyte file from the NetWare server to the PC with the Asanté card took eight seconds with IPX. Although not exactly equivalent, the same copy from the Workgroup Server 9150 (an admittedly slower server) to the 7500/100 with the Asanté card took 29 seconds under AppleTalk. However, using NetDoubler, which Asanté bundles with its PCI and NuBus cards (see story below), re-

duced that to 14 seconds, and NetDoubler with TCP/IP brought the time down to nine seconds.

For many real-world situations, particularly with NetWare servers (which have 680x0 client software), PCs are faster networking machines than Macs. The Mac is heavily taxed by 680x0 emulated code for portions of the OS, the Mac File Manager, the client and the application.

For Mac and PC network performance to compete on a level field, Apple and third parties must make more components PowerPC-native so the Mac isn't hobbled by emulation and mode switching.

The NetDoubler results show that network transfers on a Mac can potentially be in a comparable league to those on a PC.

— By Jonathan A. Oski

Comparison

From Page 27

Ethernet performance had improved since Open Transport 1.1 was released.

The battery of tests performed included running NetBench 4.01 to perform reads and writes with block sizes from 1 Kbyte to 64 Kbytes, using the Finder to copy a 10-Mbyte file from the NetWare server to the

Mac, and using Fetch 3.01 to copy the same file from the server to the test Mac over TCP/IP. Much to our surprise, we were unable to achieve throughput of more than 10 Mbps with any of the cards. We also found the performance differences between NuBus and PCI cards to be negligible in many cases during NetBench tests and pronounced in the Fetch/FTP test.

Despite what you may have presumed, in the Fetch/FTP test, classic AppleTalk transfers outperformed Open Transport on all except the TCP/IP-based application. Some of this can be attributed to the fact that NetBench 4.01, which is 680x0-based, is written for classic AppleTalk APIs (see story above). NetBench sends calls to the Mac OS via these APIs; they must then be translated to Open

Transport before data is moved. Fetch, which is Power Mac-native, calls Open Transport directly, bypassing levels of interaction. Further, the Ethernet driver in System 7.5.3 is still emulated; switching between the emulated driver and the native sections of Open Transport introduces overhead.

On the positive side, Fast Ethernet cards using Open Transport 1.1 ran much faster than cards using Open Transport 1.0 in previous tests (see 10.23.95, Page 34). Our October 1995 tests with Open Transport 1.0 showed Fast Ethernet cards running 15 percent to 42 percent faster than built-in Ethernet. With Open Transport 1.1, the PCI 100BASE T cards were up to 89 percent faster than built-in Ethernet—a doubling in performance advantage.

The winners' circle

Asanté's AsantéFAST 10/100 adapter was a leading performer in both PCI and NuBus incarnations. While the differences between the Asanté cards and the others were not as dramatic during our NetBench trials using small files (1 Kbyte to 8 Kbytes), Asanté stayed on top through tests with larger files (16 Kbytes to 64 Kbytes) when the performance of some other cards tailed off significantly. In NetBench trials, the Asanté cards achieved sustained throughput of close to 10 Mbps with 64-Kbyte

See Comparison, Page 30

NetDoubler speeds Ethernet performance

Overall value ♦♦♦♦

Asanté Technologies Inc.'s NetDoubler uses a combination of compression and a larger packet size and caching to improve network performance in AppleTalk environments.

NetDoubler, which is billed as a network-acceleration software utility that can boost Mac-based Ethernet and Fast Ethernet performance up to nine times, did deliver impressive results in our tests—although not a ninefold increase.

Asanté bundles NetDoubler with its PCI and NuBus Asanté-FAST adapters; it is also sold separately for \$99. The company said NetDoubler is compatible with other Ethernet cards.

For a network transfer, NetDoubler must be installed on the client and the server, both of which must be Macs. Because the server we used for our NetBench tests ran Novell NetWare, we couldn't do side-by-side tests. We did, however, test NetDoubler when copying files from an Workgroup Server 9150 equipped with the Asanté NuBus Fast Ethernet card to a Power Mac 7500/100 with the Asanté PCI card. File transfer speeds for copying a 10-Mbyte file from the server to the client were doubled when using NetDoubler and tripled when we enabled the TCP/IP option on NetDoubler.

Asanté said NetDoubler works by directing the flow of data over protocol stacks and avoiding other bottlenecks

through a caching scheme. Because it runs only on Macs, it is not appropriate for many situations, but for WS-based networks and point-to-point transfers it delivers impressive throughput and offers a taste

of the Mac's potential network performance.

Asanté Technologies Inc. of San Jose, Calif., is at (408) 435-8388 or (800) 622-7464; fax (408) 432-1117; <http://www.asante.com>. — By Jonathan A. Oski



NetDoubler

NetDoubler more than doubled the speed when copying a 10-Mbyte file from the server. With TCP/IP, the copy was three times as fast.

10-Mbyte file copy

Protocol set-up	Shorter is better	Seconds
NetDoubler		14.85
NetDoubler with TCP/IP		9.25
Open Transport baseline		29.19

Test configuration: NetDoubler was tested on a Workgroup Server 9150 running the AsantéFAST 10/100 Adapter for NuBus connected via an Intel IntelExpress 100BaseTX hub to a Power Mac 7500/100 with the AsantéFAST 10/100 Adapter for PCI.

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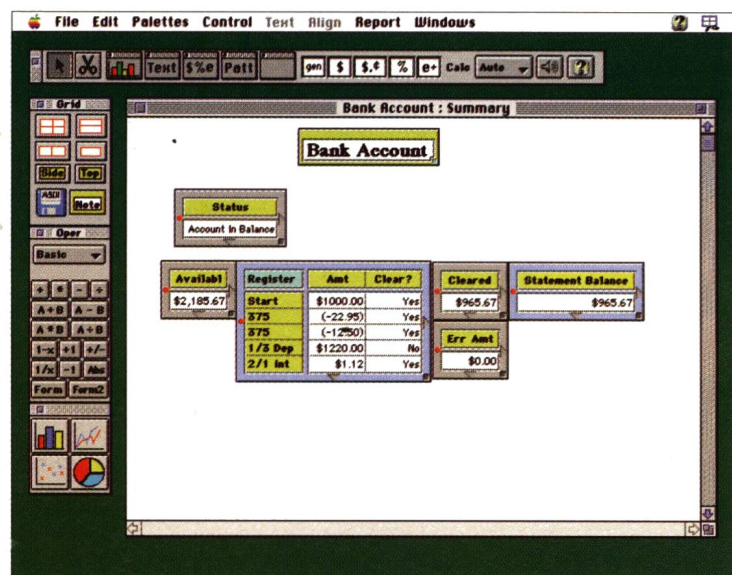
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Unlike spreadsheet applications that force you to work in a static environment, Casady & Greene's Let's Keep It Simple Spreadsheet offers a drag-and-drop interface that lets you place grids, functions and notes wherever you want and then link them to create formulas.

calculation with data, and result grids automatically adjust to their new sizes as related source grids expand and contract.

LKISS is not without its problems, though. Experienced spreadsheet users will miss database functions such as sorting and the lack of all but the most rudimentary text functions. Date and Time functions are also missing. There are no iterative functions, and the only way to import text is via the Mac Clipboard. (Graphics can be brought in as PICTs via the Clipboard or dragged into place via Macintosh Drag and Drop. Graphics export is possible only through the Clipboard.) The company plans to release an upgrade this fall that will include Date and Time operations and some database functions. Until then, many of these limitations can be worked around with thoughtful spreadsheet design.

We found the normal complement of bugs for a 1.0 release — not enough to make the program unworkable, but enough to make us save often. In more than two weeks of use we experienced about a dozen crashes, none of which did more than lose unsaved data. (The company intends to release a free bug fix in July.) Regardless of LKISS' bugs, we couldn't find any inaccurate calculations.

The documentation is good for beginners, but weak as a reference. A few minor features lack any sort of explanation, and the index is downright poor. There's no single list of all the program's operators, and the supplied examples are poorly documented.

Online help, while useful, didn't remedy the printed text's deficiencies. Technical support (a toll call, or via online services or the Internet) is good, but response to online queries is sometimes slow.

Conclusions

At \$189, LKISS is nearly double the price of ClarisWorks (which lists for \$99) but considerably less expensive than the \$339 Excel. If you use LKISS to make financial decisions, its extraordinary protection against user errors could well save the price of the product many times over. It doesn't have all the features of Excel or even of ClarisWorks' spreadsheet module, but for problem solving LKISS offers a refreshing new way of working.

Casady & Greene Inc. of Salinas, Calif., can be reached at (408) 484-9228 or (800) 359-4920; fax (408) 484-9218; webmaster@casadyg.com; <http://www.casadyg.com>. □

SCORE CARD

Let's Keep It Simple Spreadsheet 1.0

Casady & Greene Inc.

List price: \$189*

Hits: Unmatched protection against user errors; clever graphical interface; reusable custom-created operators.

Misses: Weak text support; no Date or Time functions; limited graphing.

*Competitive upgrade from other Mac spreadsheet applications, \$79.95. Users who return the registration card receive a \$25 rebate, whether they upgraded or made a new purchase.

New spreadsheet does what the name says

By Loftus E. Becker Jr.

Casady & Greene Inc.'s Let's Keep It Simple Spreadsheet could be the next killer application. It's an appealing and remarkably powerful calculation engine with unparalleled protection against common and potentially costly user errors in spreadsheets. However, in its present incarnation it lacks some important capabilities that spreadsheet users have long taken for granted.

The \$189 application features a fresh graphical approach to managing complex calculations: You build data systems by dragging functions and data onto a layout and then linking them with MacDraw-like tools. This highly visual metaphor may make it more accessible to novice users than its chief competitors, Microsoft Excel and ClarisWorks.

I'll draw you a picture

Let's Keep It Simple Spreadsheet, or LKISS, opens to a collection of object palettes and a blank window, or sheet. To work in LKISS you drag objects, such as empty grids, calculation operators and data formats, into this window. Grids are similar to groups of cells in a standard spreadsheet, holding numerical and text data. You connect grids with mathematical operators, which take one or more grid inputs and output them to another grid.

Besides spreadsheet functions, four types of graphs are available: line, bar, scatter and pie. To create a graph, drag a graph icon into the sheet window and connect it to a data-filled grid. Graph support, however, is limited: You can plot multiple series on a single graph but with only one scale. Adjusting the axes or other fine-tuning may require considerable effort or editing in a dedicated graphics program.

Casady & Greene's Let's Keep It Simple Spreadsheet is a powerful, useful tool.

LKISS sheets get crowded quickly, but they are easily simplified. User-created reports, which appear automatically in the Reports menu, show a chosen subset of the Master sheet. You can also select portions of the Master sheet and "crunch" them to a single object, which you then double-click to show details.

A crunched portion of the

LKISS sheet can be saved as a separate operator and thereafter used in other sheets or shared with others. Casady & Greene plans to set up a Web site for the exchange of custom operators and other helpful materials.

Averting disaster through design

Once you're used to LKISS — and beginners, who have nothing to unlearn, may get up to speed faster than experienced spreadsheet jockeys — the program is a powerful and useful tool. Calculations are reasonably fast: In day-to-day use we noticed only occasional delays, although complex calculations take their toll. For example, filling a column with 1,000 numbers, taking the square root of each and then squaring the result was almost instantaneous in Excel, but took about 15 seconds in LKISS on a Power Mac 7500.

Inadvertent errors plague spreadsheet designers: It's all too easy to type over a formula with a number or add cells without extending a related calculation's range. Such errors frequently go unnoticed, sometimes with disastrous results. Although mistakes are possible in LKISS, this particular kind of problem is circumvented since you can't replace a

Comparison

From Page 28

files. Asanté's cards come bundled with NetDoubler, which we found to be a real performance booster (see story, Page 28).

Another top performer was Digital's Fast EtherWorks PCI adapter. It costs \$50 less than Asanté's PCI card and performed as well in the NetBench and Finder copy tests. During the Fetch/FTP testing the Digital card outperformed the AsantéFAST (and all other cards) by almost 50 percent.

Sonic's and Dayna's NuBus cards are capable alternatives to the Asanté cards, but Dayna's PCI card, like Standard Microsystems', could not keep pace with the leaders. Sonic delivered an improved driver late in our tests that brought its PCI card's performance in line with the Digital and Asanté offerings. Farallon's NuBus card fared poorly in our tests, but its PCI card turned in respectable numbers. We encountered significant problems with some cards that necessitated vendor-supplied fixes. We expect forthcoming updates from Dayna and Farallon to improve deficiencies in their respective adapters' performance. Standard Microsystems also plans a driver update.

Conclusions

A Fast Ethernet adapter can certainly improve network throughput under some conditions. If your current Ethernet network is saturated, a migration to Fast Ethernet seems to be a forgone conclusion.

Given the added expense of the NuBus cards, we don't recommend them on a broad scale. If you want to improve network throughput for a large investment of NuBus-based Macs that you don't plan to replace soon, a selective purchase of NuBus Fast Ethernet adapters is probably warranted. A Bay Networks, 3Com, Cisco or Fore Systems switched Ethernet hub may be a more cost-effective and less labor-intensive option for sites with large NuBus-based Mac populations.

The biggest question is: When will Fast Ethernet be significantly faster? Open Transport performance should continue to improve as more code optimization occurs. When more OSes, network drivers and applications become Power Mac-native you should expect to see Fast Ethernet throughput on AppleTalk improve by a factor of three or greater, according to vendors working on optimizing software.

Work by Asanté and other companies has proven that dramatic network performance gains can be achieved with Open Transport. Close monitoring of progress by Apple and third parties should help determine the right time to buy.

For those ready to move to Fast Ethernet, the AsantéFAST 10/100 adapter for PCI, Digital's Fast EtherWorks, Farallon's Fast Ether TX-10/100 and Sonic's EtherFE 10/100 offer the best price/performance equations. We look forward to seeing better Fast Ethernet performance from these and other cards in the near future. □

Project Leader Kristina De Nike and Technical Specialist Jim Galbraith from MPG Labs in Foster City, Calif., ran the tests and summarized the data for this review.

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Computer Reseller News gave the SonicTron PT770 their Editor's Choice award in April, 1996.

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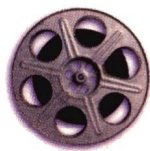


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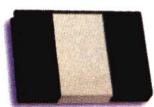
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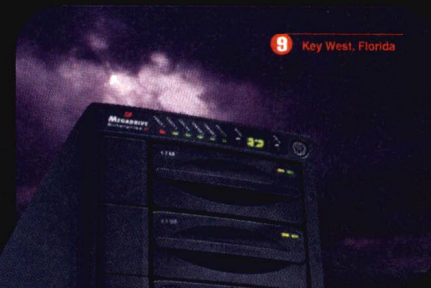
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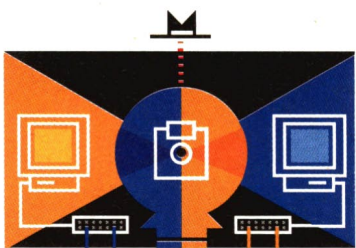
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SOLUTIONS

MAC ATTACK

A 1995 survey by Arizona State University found that nearly 20 percent of Web servers are Mac-based.

MACWEEK 06.24.96

Product Trends • User Experience • Expert Advice

PAGE 33

NETWORK SECURITY

Leave the doors open, but keep the information secure

By April Streeter

For Brad Schrick, a consultant and Web developer in Palo Alto, Calif., convincing people to visit his Web site is more important than putting up fire walls to keep them out.

Schrick, who keeps a Mac-based database and Web site of the growing number of Mac hosts connected to the Internet, said: "With my Web pages I'm trying to get the most people to see what I've published, and at that level, security is not a prime issue — almost the opposite.

"However, there are important issues when you have different people putting files on your server, as I do, and those can't be ignored," he said. Schrick has password security on his Mac OS Web listings to deter "pranksters" from coming in and messing with his files.

In the heterogeneous, hacker-happy world of the Internet, network managers can never be entirely sure of the safety of their networks. While Macs have decided security advantages compared to Unix-based Internet hosts, even pure-Mac sites should have operators who know the latest options for putting LAN resources under lock and key.

In a survey last year of more than 300 IS professionals and their network sites, the Computer Security Institute of San Francisco found that about 20 percent of organizations with an Internet connection admitted to suffering a "security incident."

Ironically, the Mac is less vulnerable (and therefore more appealing) because of the proprietary, closed operating system and hardware that hindered its popularity in the general business market. Unix is still king of Internet server platforms, and Microsoft Windows NT plays the great contender, but the Mac has found a comfortable middle ground as a popular platform for the Web and Internet services.

Jeff LaCoursiere, president of FastLane Communications Inc., a security consulting company in Fort Worth, Texas, said: "In the past, only Unix-based machines had ready-written software to provide Internet services. Most of these are still freeware and distributed on the Net, which gives hackers the ability to peruse the source code and find the bugs to exploit."

The case is a bit different for the Mac, he said. "Most Mac source code is not avail-

"We want to get our data out there ... but our security will always be a moving target."

Scott Weininger,
Naval Undersea Weapons Center

able, which keeps the bugs more obscure — but they still exist."

A number of Web sites and bulletin boards keep track of the numerous bugs and configuration errors that users (or hackers) have found, and the Mac rarely shows up in these lists.

"You'll find many, many entries for Unix hosts, and perhaps some for PC hosts, but not for Macs," Schrick said. This is true even though the Mac OS is the second most common platform for Web servers, he noted.

"The Web site Comvista.com recently hosted a contest for \$10,000 to find security holes in the Mac OS, but while there are people that claim the Mac has holes, they have yet to demonstrate them widely, or claim the prize," Schrick said.

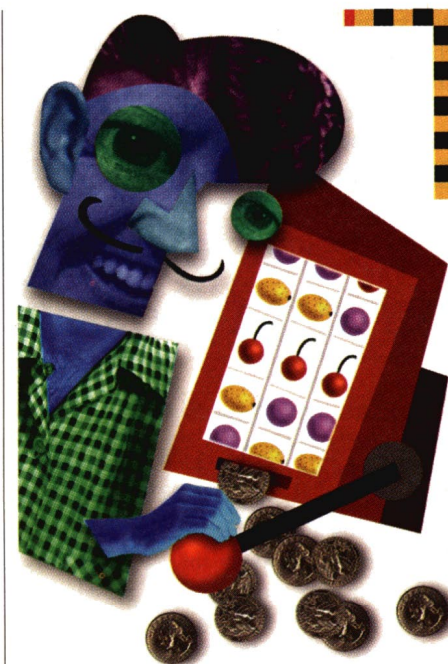
While this advantage may sway some

managers toward Mac-based server software, it doesn't relieve them of the responsibility of formulating a security policy and possibly implementing security options. In addition to using virus software on hosts and clients, managers have the option of putting packet-filtering bridges or routers on the LAN, deploying fire walls on Unix or NT hosts, and using password-protection software as well as data-encryption techniques to protect data files.

Schrick recommended WebLock from Maxum Development Corp. of Streamwood, Ill., which lets managers control access to Web pages based on file-sharing privileges set in the Mac Finder. Schrick also separates management and publishing of his Web pages onto two servers — one that communicates to the Internet with TCP/IP and the other that does not.

Another way to provide basic protection is to segregate an Internet server from the rest of the network by a packet-filtering device such as a bridge or router. These are available from numerous vendors, among them Cisco Systems Inc. of San Jose, Calif.; Compatible Systems Corp. of Boulder, Colo.; and Livingston Enterprises Inc. of Pleasanton, Calif. In addition to traffic seg-

See Solutions, next page



GORDON STUDER

MACINTOUCH RIC FORD

System 7.5.3 Revision 2 looks like a good bet

System 7.5.3 Revision 2 finally arrived. It definitely fixed problems, and it seems that most people can install it successfully. Unfortunately, it is inevitable with the current state of the Macintosh that some people have had experiences with even a small update like this one. There is no Remove option in the Installer script, and a few readers reported crashed hard disks, system freezes, printing problems, networking crashes and similar delights. A few others were unable to cajole the Installer into putting the update on their Macs. The usual precautions are worthwhile: a complete backup, a Disk First Aid check, updating driver software and reviewing Apple's instructions.

Since it fixes significant problems, applying the update certainly makes sense on the models for which Apple recommends it, as well as on third-party clones of those models. Happy readers reported Revision 2 fixed disk problems, eliminated performance bottlenecks and solved some software conflicts. Any Mac OS change is a gamble, but the odds are good for this one. The revision should have no effect on such models as the Quadra series and is not recommended for them.

See MacInTouch, next page



BUD PEEN

SOLUTIONS

From previous page

mentation effects, packet-filtering devices block two common hacker tactics: spoofing (when a machine outside the network pretends to be local in an attempt to gain access) and port scanning (which checks the services running on a server in hopes of finding vulnerability).

Public access

At Ohio State University in Columbus, Jim Tufano uses packet-filtering bridges

from Columbus-based KarlNet Inc. as part of an overall security system for the many Macs, PCs and Unix-based workstations available to students in the public-access computer labs.

While most site managers are worried about protecting their inner network from outside hackers, Tufano is also concerned about Ohio State student hackers connecting via the public labs to the university subnet and the larger Internet. Thus, in addition to segmenting host servers, each lab site sits behind a KarlBridge.

"We're using the KarlBridge as a way to bridge off traffic and do protocol filter-

ing, and as an authentication device," Tufano said.

Each time students sit down at a computer, they must be authenticated by typing in a name and password that is transmitted to the Unix-based Internet servers, which run authentication software. Only after users are authenticated by the server does the KarlBridge open a session to the outbound Internet. It also reports to the server any time users try to bypass the authentication process.

Tufano said the bridge is one step below a filtering router in terms of price and function. "I don't want to say that it's exactly at the same level in terms of security as a filtering router — it can't block NFS [Network File System], for example," Tufano said.

But Tufano said he believes the KarlBridge keeps casual hackers from getting out. The bridge can be configured to permit or deny incoming Internet services, such as Web browsing or FTP, so each Ohio State lab can decide how rigid it wants security to be.

Moving targets

Even with a filtering router or a fire wall guarding the server, transmitting data over the Internet can still pose a security risk. At the Naval Undersea Weapons Center in New London, Conn., network engineer Scott Weininger must plan a variety of security measures as he designs a Web host to serve up unclassified but still sensitive files and images on different weapons programs.

On the one hand, Weininger wants to disseminate information about submarine programs to build public support for them, but on the other hand, security must be fairly rigid.

"On the public side, we want to get our data out there, but we will have a fire wall and IP [Internet Protocol] filtering turned on; our security will always be a moving target," he said. Weininger is designing his

pages for a WebStar server from Quarterdeck Corp. of Santa Monica, Calif., that would run on a Mac. To encrypt connections, he plans to implement WebStar's Secure Socket Layer (SSL). Based on the SSL standard developed by Netscape Communications Corp. of Mountain View, Calif., and RSA Data Security Inc. of Redwood City, Calif., WebStar SSL lets browsers open a Web session on a different server port and encrypts all

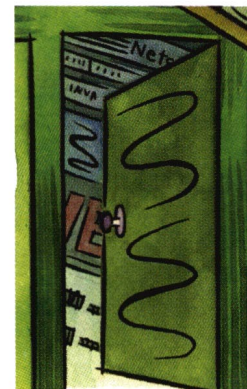
traffic flowing through that port. The server must initially be authenticated and receive a Digital ID and public/private encryption key from VeriSign Inc. of Mountain View.

Weininger said he will have a guest book that people can sign to get a password and access the secure portion of the server. "When they get past that authentication process," he said, "WebStar SSL ensures that the link is encrypted so the traffic can't be tampered with."

Although he said he isn't ready to develop his guest book, Webgenesis Inc. of Ithaca, N.Y., recently released a WebStar plug-in designed to register and authenticate users.

Weininger said he is happy with WebStar SSL but thinks Quarterdeck should include the VeriSign authentication certificate as part of the SSL bundle. He also said he has few illusions about the long-lasting efficacy of SSL or any other security measures.

"Is SSL as good as other encryption? Well, it's not Type 1 [currently the highest level of encryption], but it is high enough for these pages, I think," he said. □



Great walls of fire

There aren't any fire walls specifically designed for the Macintosh operating system, but since it has a reputation for being naturally secure, there probably won't be unless security holes are found. Because of this, it seems the Mac platform can only grow in popularity as an Internet host.

Ampy Buchholz, network engineer at Lightspeed Software Inc. in Bakersfield, Calif., had an assignment to set up an Internet connection and a Web server two years ago to disseminate patches and updates for the company's WAN connectivity products.

Lightspeed chose Unix as the most robust server platform, but couldn't find

a local provider offering a high-speed Internet link. So Lightspeed became a service provider for the Bakersfield area — cautiously.

"Security was of the utmost importance," Buchholz said; the company had to be sure to protect its binary software code. From the first day the connection was open, Lightspeed used the Gauntlet fire wall from Trusted Information Systems Inc. of Rockville, Md.

Other fire walls are available from Digital Equipment Corp. of Maynard, Mass., and Check-Point Software Technologies Ltd. of Lexington, Mass., but Buchholz said he chose Gauntlet because he thought it was the most robust and economical option.

He said he is thankful for his decision because, he alleged, Bakersfield's other Internet providers quickly attempted to breach Lightspeed's server security.

"Gauntlet proved essential to protecting our net when local people took major offense and recruited [a hacker] to try to find our security holes," he said. He said the experience proved to him that the hacker threat is real, but he wouldn't detail the incident further, since the case is still under investigation by the FBI's Computer Crimes Division.

"We feel fairly safe now," he said, "but there really is no such thing as impregnable."

— By April Streeter

MACINTOUCH

From previous page

Apple's Tech Note 1050, which describes the System 7.5.3 Revision 2 in detail, is available from its online support areas, including <http://dev.info.apple.com/technotes/tn1050.html> on the Internet. There are also relevant articles in the Tech Info Library (search on "MacOS 7.5.3 Revision 2").

In a mildly confusing matter, the second floppy of the two-floppy package is often ignored during installation, and you may not need to download it if you're getting the package electronically. This second floppy apparently is used only with System 7.5.3 installations, not with System 7.5 Update 2.0 installations.

Who's on first?

Tracking these system software versions and enablers has become even more absurd an exercise than memorizing Mac model names. Here is another attempt at cataloging the mess:

► System 7.5.3 Revision 2 installs on top of System 7.5 Update 2.0 or System 7.5.3 or, here's a twist, on top of System 7.5.2 with PowerBook Enabler 1.2.x on certain laptops.

► If System 7.5.3 was pre-installed on your Mac at the factory, it looks like the best approach is to install System 7.5 Update 2.0 on top of it before applying Revision 2. System 7.5 Update 2.0 fixes a bunch of bugs not covered by the System 7.5.3 installation, including a memory leak in Standard File (Open and Save dialogs), various freezes and some other glitches.

Some of these fixes and updates are not covered by Revision 2.0 either, and Revision 2.0 also lacks the Important Software Updates folder from System 7.5 Update 2.0 (see Tech Note 1050 and 06.10.96, Page 37).

► The factory-installed System 7.5.3 has no enabler files, while System 7.5 Update 2.0 has one or two enablers (see 06.10.96,

Page 37). System 7.5.3 Revision 2.0 adds a System 7.5.3 Enabler file to the factory System 7.5.3 configuration.

For System 7.5 Update 2.0, it simply modifies the existing enabler(s), and it updates the PowerBook Enabler in the odd System 7.5.2/PowerBook Enabler 1.2.x configuration.

► AppleVision monitor owners need to install AppleVision Software Fix for System 7.5 Update 2.0 before installing the revision, as noted in the enclosed documentation.

► The System file itself is identified in a factory-installed System 7.5.3 as Version 7.5.3; however, it is tagged as Version 7.5 in System 7.5 Update 2.0. Revision 2 leaves the System file's version number unchanged.

► The System 7.5.3 factory installation package is available on some CD-ROMs, including Apple's May '96 Developer CD, a CD-ROM shipped with PCI token-ring

cards and CD-ROMs shipping with some Mac OS clones.

What to watch

Readers' reports suggest a few things to watch when installing the revision, although it was not possible to confirm these items.

The new Startup Tuner extension may conflict with a program or two. You may need to reset network parameters and restart the Mac or even re-install printer drivers if you have problems (with Hewlett-Packard inkjet models, for example). Flaky Internet software, including beta releases of Netscape Navigator, may be affected by the update.

In general, I have scores of reports of unique, fluke problems with System 7.5.3 Revision 2.0 and virtually no consistent, repeatable problems. □

Comments on MacInTouch are welcome at (508) 897-2621. Please address e-mail to ricford@macintouch.com on the Internet or 72511,44 on CompuServe. The MacInTouch home page is at <http://www.macintouch.com/>.

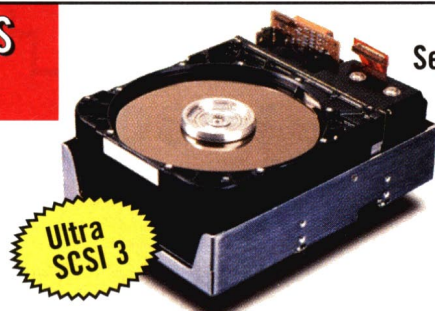
Tracking system and enabler versions is as crazy as memorizing Mac model names.

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Quantum Capella	2.2GIG MR	8.6MS	5400	\$ 525	\$ 595
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Seagate Barracuda 2	2.5GIG LP	8MS	7200	\$ 715	\$ 785
Seagate Barracuda 2W	2.5GIG LP	8MS	7200	\$ 775	\$ 855
Conner CFP2107W	2.5GIG LP	8MS	7200	\$ 795	\$ 895
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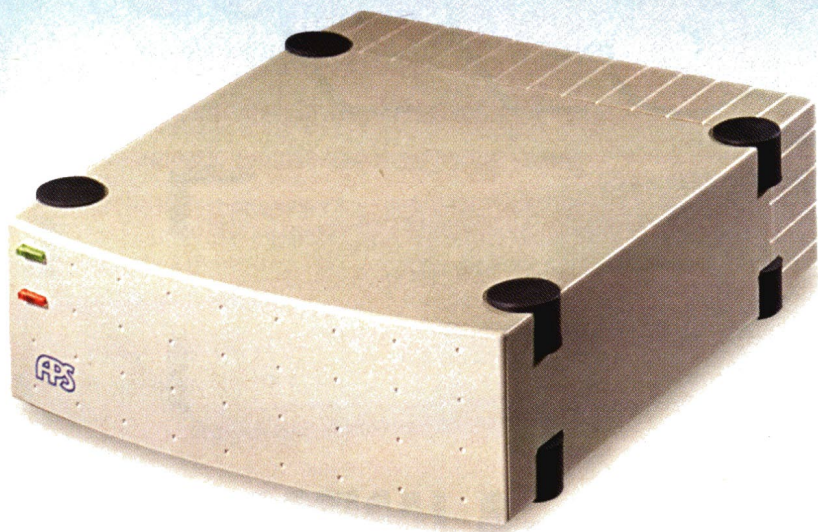
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MICROPOLIS
Power Matched for Power PC
MacUser ZD
LABS
★★★★½

With sustained reads of over 4MB per second and sustained writes of over 5MB per second, the APS MS 4.0AV is the ideal entry-to-mid level drive for AV use. Its thermal calibration helps prevents data stream interruption.

9GB FOR THE AV PRO

APS MS 9.0AV

- ✓ Best cost per MB of our AV specific drives
- ✓ 8669MB formatted capacity
- ✓ AV optimized thermal calibration
- ✓ 5-year warranty



Internal configuration
MICROPOLIS
Power Matched for Power PC
MacUser ZD
LABS
★★★★½

Eliminate jerky motion and lost sound in AV capture with the APS MS 9.0AV. It accomplishes smooth video and audio by allowing T-cal cycles only when the bus is free.

APS HIGH-PERFORMANCE SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS MS 2.0	1955MB Micropolis 4221 7200 rpm	★★★★	★★★★	\$549 ⁹⁵ \$649 ⁹⁵
APS MS 2.0AV	1955MB Micropolis 4221AV 7200 rpm	★★★★	★★★★	649 ⁹⁵ 749 ⁹⁵
APS Q 2.0	2050MB Quantum Atlas XP32150W 7200 rpm	★★★★	★★★★	699 ⁹⁵ 799 ⁹⁵
APS ST 2.0	2047MB Seagate ST 32550N 7200 rpm	★★★★	★★★★	749 ⁹⁵ 849 ⁹⁵
APS MS 4.0	4064MB Micropolis 3243 7200 rpm	★★★★	★★★★	899 ⁹⁵ 999 ⁹⁵
APS Q 4.0	4101MB Quantum Atlas XP34300 7200 rpm	★★★★½	★★★★½	899 ⁹⁵ 999 ⁹⁵

APS HIGH-PERFORMANCE SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS MS 4.0AV	4064MB Micropolis 3243AV 7200 rpm	★★★★	★★★★	\$999 ⁹⁵ \$1099 ⁹⁵
APS ST 4.0	4094MB Seagate ST 15150N 7200 rpm	★★★★	★★★★	1099 ⁹⁵ 1199 ⁹⁵
APS MS 9.0	8669MB Micropolis 1991 5400 rpm	★★★★	★★★★	1899 ⁹⁵ 2099 ⁹⁵ *
APS MS 9.0AV	8669MB Micropolis 1991AV 5400 rpm	★★★★	★★★★	1999 ⁹⁵ 2199 ⁹⁵ *
APS ST 9.0	8669MB Seagate ST410800N 5400 rpm	★★★★	★★★★	2099 ⁹⁵ 2299 ⁹⁵ *

APS FAST/WIDE SCSI DRIVES

Model	Capacity/Features	Awards	Internal	SR2000
APS MS 2.0W	1955MB Micropolis 4221W 7200 rpm	★★★★	★★★★	\$649 ⁹⁵ \$749 ⁹⁵
APS Q 2.0W	2050MB Quantum Atlas XP32150W 7200 rpm	★★★★	★★★★	799 ⁹⁵ 899 ⁹⁵
APS MS 4.0W	4064MB Micropolis 3243W 7200 rpm	★★★★	★★★★	999 ⁹⁵ 1099 ⁹⁵
APS Q 4.0W	4101MB Quantum Atlas XP34300W 7200 rpm	★★★★	★★★★	999 ⁹⁵ 1099 ⁹⁵

30-day money-back guarantee on all APS brand products. Your risk is the cost of shipping.
• Drive-In Drive-Out Repair or Replacement Warranty: APS will, at its discretion, replace or repair products found to be defective according to the terms of the product's warranty.
• Refused orders subject to 20% restocking fee.
• Listed capacities are formatted.
• Actual data compression and tape capacity vary greatly depending on the type of data recorded, other system parameters and environment.
• Internal hard drives include brackets, cables, cords and LEDs required for operation with the specified Macintosh where applicable. External SCSI-2 drives come with a premium SCSI cable, power cord and user guide.
• All hard drives from APS Technologies come preformatted with Apple's System 7.0.1 software, and APS Technologies' APS PowerTools SCSI formatter/hard disk partitioner. You may need to install system software appropriate to your machine before use.
• Prices and specifications are subject to change without notice. Not responsible for typographical errors.
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MacUser Editor's
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Consultant's
Choice Award

REF. CODE: 307026

APS[®]

Technologies

BACKUP 8GB - FAST!

JUST **\$899⁹⁵** External configuration

APS HyperDAT[®]

- ✓ Up to 8GB of storage on one 120m DAT tape[†]
- ✓ High transfer rates of up to 28MB per minute[‡]
- ✓ Compatible with all DDS-1 and DDS-2 media
- ✓ Includes the latest Retrospect 3.0 backup software — **FREE**



Delivering backup speeds as high as 28MB per minute, this DDS-2 backup system can pack up to an incredible 8GB on a single 120m DAT tape!* The APS HyperDAT is compatible with other DDS-1 DC and DDS-2 DC drives. Perfect for office and network backup and archiving!

[‡]With hardware compression

*Assumes 2:1 compression ratio



HIGH PERFORMANCE 8X CD-ROM

APS CD8 Pro

- ✓ Terrific value
- ✓ Fast 1.2MB/sec. transfer rates
- ✓ 115 ms average access
- ✓ 8X speed provides smoother video output

GREAT PRICE

\$399⁹⁵ External configuration



Take advantage of the high performance 8X CD-ROM speed of the new APS CD8 Pro to supercharge any CD-ROM application. The APS CD8 Pro's 1200KB per second maximum transfer rates in 8X mode provide smoother full-screen video output than earlier generations of CD-ROM drives, and makes it terrific for use with large, complex files. Additionally, the fast average access time of the APS CD8 Pro makes it a great match with interactive multimedia.



Polaroid SprintScan 35/ES

- DSP on-board (Digital Signed Processor)
- Scans in less than a minute
- Scans images at up to 2700 dpi with 24-bit color
- High-quality 35mm film — positive or negative

105305 **\$1,579⁹⁵**

Color QuickCam

- Record color movies directly from your Mac
- Captures still images in millions of colors at up to 640 x 480 pixel resolution.
- Capture color movies at 24 frames per second or better in thousands of colors at 160 x 120 pixels

106360 **\$229⁹⁵**



Alpha Platinum 922cid

- 900MHz
- Caller ID LCD readout
- 2 line use with four programmable rings for each line
- 20-number speed dial memory.
- Superb clarity, range and digital voice encryption.

106374 **\$299⁹⁵**



APS QIC & DAT TAPE BACKUP SYSTEMS

Model	Capacity/Features	Awards	Internal	SR2000
APS HyperQIC™	2GB	MacWeek ★★★★	N/A	\$499 ⁹⁵
Travan 4 Mechanism				
APS HyperDAT [®]	8GB	★★★★	849 ⁹⁵	899 ⁹⁵
DDS-2 Compression Mechanism				
APS HyperDAT [®] Pro	8GB	★★★★	1049 ⁹⁵	1099 ⁹⁵
DDS-2 High-Speed Mechanism				

APS DLT TAPE BACKUP SYSTEMS

Model	Capacity/Features	Awards	Full-Height
APS DLT40	40GB	★★★★	\$5499 ⁹⁵
Digital Linear Tape Mechanism			
APS DLT4500	200GB	★★★★	8899 ⁹⁵
Digital Linear Tape Loader			

All APS tape drives include Retrospect[®] by Dantz[®]

To receive an automated fax listing of all APS documents, call 800-374-5802 from any touch-tone telephone. Then call 816-920-4150 from a fax machine with a handset or fax modem and follow the instructions.



These products are performance-matched for optimal performance in the PowerPC environment.

APS MEDIA SALE

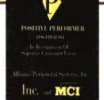
IN STOCK

maxell	SALE PRICE	maxell	SALE PRICE
1018-902 4mm DAT Cleaner	\$9.95	60M DAT	\$5.95
1018-112 8mm 112 Cartridge	6.95	90M DAT	9.95
105039 8mm 160 Cartridge	14.95	120M DAT	24.95

SONY	SALE PRICE	3M	SALE PRICE
CD-R 74 Min	\$9.95	650MB Cartridge	\$49.95
CD-R 74 Min 10pk	89.95	2.6GB MO	99.95

CALL FOR YOUR FREE

Early Summer 1996 CATALOG
Featuring our complete line of APS Drives, Supplies & Accessories



APS TECHNOLOGIES

*Available only in full-height case

MacWEEK

GREAT PRODUCTS... PRICELESS SUPPORT

LOWEST PRICE EVER!

ON PACKET WRITING CD-R

APS CD-R

- ✓ Uses CD media with 100-year shelf life
- ✓ Random access gives you fast retrieval
- ✓ Supports variable and fixed packet writing

At the lowest price ever for Sony 2x by 2x CD-R technology, the APS CD-R is a fantastic value for authoring, mastering or backing up to CDs. CD-R media costs less than 2¢ per MB and has an estimated 100-year shelf life. The APS CD-R is based on Sony's CDU-920S mechanism with its giant 1MB cache buffer, and supports packet writing and all popular CD formats specified in the Orange Book Part II. The APS CD-R comes with a FREE copy of DiscRibe CD recording software and it can be used with Retrospect as a backup device.



External configuration

A \$350 value - FREE

650MB OPTICAL & 4X CD-ROM AT ONE LOW PRICE

APS PD4

- ✓ Combines removable optical storage and backup with CD-ROM in one device!
- ✓ Accepts 650MB rewritable optical cartridges and CD-ROMs interchangeably

GREAT PRICE

\$499.95

External configuration

The new APS PD4 is the most versatile drive available for your Mac. Combining a fast 4X CD-ROM player with rewritable 650MB optical cartridge drive, the APS PD4 saves a SCSI address while performing these two important desktop functions.



THE ULTIMATE SYSTEM FOR CD-R MASTERING

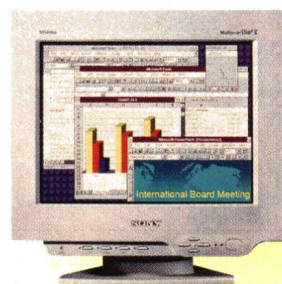
APS CD-R Mastering System 2.0

- ✓ High-performance 4X CD-R drive & high-performance 2GB AV drive
- ✓ Free copy of TOAST CD-ROM Pro - a \$500 value

\$2499.95

External configuration

The ultimate goal when burning CD-R media is a successful burn on the first try, minimizing wasted media, and our new high-performance CD-R Mastering System helps you meet that goal. Combined in a single full-height enclosure, you'll find a high-performance 4X/4X CD-R drive and either 2GB or 4GB of high-performance AV storage. You'll also receive a FREE copy of TOAST CD-ROM Pro recording software - a \$500 value - to complete the task.



106377

\$499.95

Sony Multiscan® 15sfl Trinitron® Graphic Display

- Supports resolutions up to 1280 x 1024 @ 60Hz
- On-screen display of digital controls for easy picture adjustment



Casio QV-10A plus Digital Camera

- 1.8 inch color TFT active matrix viewfinder
- Send images to a Mac or PC, view on a TV, copy on a VCR
- Stores up to 96 images in memory
- Includes Adobe's PhotoDeluxe™ software



106364

\$499.95

End that cable mess!

SCSI Conduit®

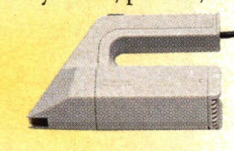


105119

\$29.95

System Sweeper

- Powerful vacuum cleans keyboards, printers, etc.



100681

\$29.95

APS CD DRIVES				
Model	Features	Awards	Internal	SR2000

APS CD8 Pro 8X-SPEED
Data transfer rates up to 1200KB per second!



N/A

\$399.95

APS PD4 CD-ROM/Removable Optical
650MB optical storage with 4X CD-ROM in one device

N/A

499.95*

APS CD-R Recordable CD-ROM
FREE DiscRibe CD recording software (\$350 value)

N/A

599.95*

APS CD-R Plus Recordable CD-ROM
FREE TOAST CD-ROM Pro recording software (\$500 value)

N/A

899.95*

APS CD-R Pro 4X4 Performance CD-R
FREE TOAST CD-ROM Pro recording software (\$500 value)

N/A

1799.95*

APS CD-R Mastering System 2.0
4X read/4X write recording engine and a 2GB AV scratch disk

N/A

2499.95*

APS CD-R Mastering System 4.0
4X read/4X write recording engine and a 4GB AV scratch disk

N/A

2999.95*

APS MO DRIVES			
Model	Capacity/Features	Awards	SR2000

APS 230MB MO
4500 rpm drive/230MB



\$449.95

APS PD4 CD-ROM/Removable Optical
650MB optical storage with 4X CD-ROM in one device

N/A

499.95*

APS 2.6GB MO
4MB cache/2.6GB



1799.95

• 30-day money-back guarantee on all APS brand products. Your risk is the cost of shipping.
• Drive-In-Drive-Out or Replacement Warranty: APS will, at its discretion, replace or repair products found to be defective according to the terms of the product's warranty.
• Refund orders subject to 20% restocking fee.
• Limited capacities are formatted.
• Actual data compression and tape capacity vary greatly depending on the type of data recorded, other system parameters and environment.
• Internal hard drives include brackets, cables, cords and LEDs required for operation with the specified Macintosh where applicable. External SCSI-2 drives come with a premium SCSI cable, power cord and user guide.
• All hard drives from APS Technologies come preformatted with Apple's System 7.0.1 software, and APS Technologies' APS PowerTools SCSI formatter/hard disk partitioner. You may need to install system software appropriate to your machine before use.
• Prices and specifications are subject to change without notice. Not responsible for typographical errors.
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*While supplies last! CALL NOW!

APS SYQUEST DRIVES				
Model	Capacity/Feature	Awards	Internal	SR2000

APS SQ 5200 194MB
Compatible with 200, 88 and 44MB cartridges



N/A

\$349.95



Call for current RAM prices



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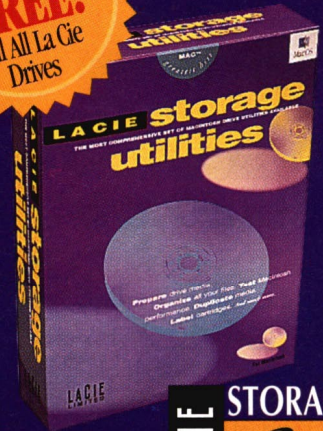
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world
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Drives



All products
bearing this
Storage Utilities



mark include acclaimed
Silverlining Disk
management software
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performance enhancements,
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Support

30 Day
Money Back
Guarantee

Factory Direct
Quality &
Value

Ready to
Plug And
Play

LACIE LIMITED

INTERNAL HARD DRIVES



▲ High-performance drive and controller technology.

\$849

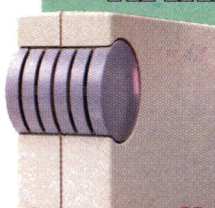
Quantum Atlas 4.3 GB

3.5" Drives

850MB Quantum Trailblazer	3 yr. warr.	\$179
1080MB Quantum Fireball*	3 yr. warr.	\$234
1280MB Quantum Fireball	3 yr. warr.	\$257
2160MB Ultrastar ES	5 yr. warr.	\$429
4.3GB Quantum Atlas 7,200 rpm	5 yr. warr.	\$849

Brackets available for \$10 with internal hard drive purchase.
* While supplies last.

EXTERNAL HARD DRIVES



TSUNAMI

- ▲ Ready to plug and play with switchable active termination, cables, and La Cie Storage Utilities.
- ▲ Up to 4.3Gb capacity in a 6.5"x8.5"x2.2" compact case.

\$499

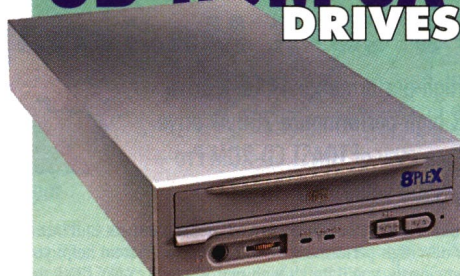
Ultrastar ES 2160 MB

Tsunami External Drives

850MB Quantum Trailblazer	3 yr. warr.	\$249
1080MB Quantum Fireball*	3 yr. warr.	\$299
1280MB Quantum Fireball	3 yr. warr.	\$327
2160MB Ultrastar ES	5 yr. warr.	\$499
4.3GB Quantum Atlas 7,200 rpm	5 yr. warr.	\$929

* While supplies last.

CD-ROM 8X DRIVES



- ▲ Fastest access speed available.
- ▲ Transfer rates up to 1200kb/sec.
- ▲ Smooth audio and video playback.

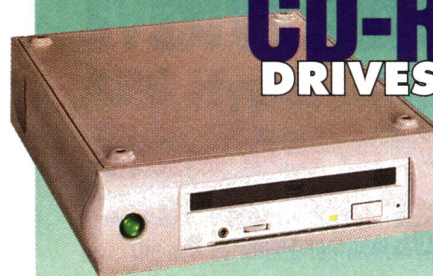
\$299

8X CD-Rom

8X CD-Rom External

\$299

CD-R DRIVES



- ▲ Low cost media for backup.
- ▲ CD-Rs ship with Gear Multimedia software.
- ▲ Create your own CD with fast write capability.

\$1299

4X CD Recorder

CD-Recorders

2X CD Recorder with Gear MultiMedia	\$699
4X CD Recorder with Gear MultiMedia	\$1299
650 CD-R Disk 74 Minutes	\$89

POWER WIDE HARD DRIVES

- ▲ Utilize Wide-SCSI technology for high-speed, high capacity file transfer

FAST: 1 drives + 1 card

WRITE

7.0 MB/Sec

READ

7.7 MB/Sec

FASTER: 2 drives, 2 cards + RAID

WRITE*

13.0 MB/Sec

READ*

14.3 MB/Sec

FASTEST: 3 drives, 3 cards + RAID

WRITE*

32.8 MB/Sec

READ*

27.0 MB/Sec

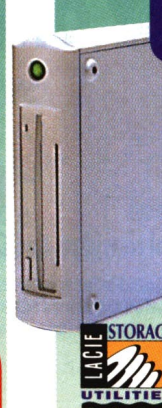
Power Wide External Drives

2.0GB Quantum Atlas Wide + Wide PCI Adaptec 2940 Board	NEW! \$1099
2.0GB Quantum Atlas Wide + RAID + Wide PCI Adaptec 2940 Board	NEW! \$1199
4.0GB Quantum Atlas Wide + Wide PCI Adaptec 2940 Board	NEW! \$1299
4.0GB Quantum Atlas Wide + RAID + Wide PCI Adaptec 2940 Board	NEW! \$1399

* RAID Level 0 (Striped)

For PCI Macs only

OPTICAL DRIVES



- ▲ Optical is the new standard in removable reliability.
- ▲ Available in two popular capacities.
- ▲ Compact storage convenience.

\$1999

2.6GB Optical

230MB PowerBook Internal	1 yr. warr.	\$399
230MB Optical Cartridge		\$25
640MB External		\$599
640MB Optical Cartridge		\$49
2.6GB External	1 yr. warr.	\$1799
2.6GB Optical Cartridge		\$99

DAT AND DLT DRIVES



- ▲ The ideal medium for data backup.
- ▲ The cheapest backup solution per megabyte.

\$899

8.0GB DAT DDS-2

DAT Drives Includes Retrospect

8.0GB DAT DDS-2 External	\$899
8.0GB TURBO DAT DDS-2 External	\$1089
30.0GB Quantum DLT External	\$2999
40.0GB Quantum DLT External	\$4999

PORTABLE JOULE DRIVES



- ▲ Docking provides new security and backup solutions.
- ▲ Share hard disk-sized files with diskette convenience.
- ▲ Unplug and go for convenient data transport.

Joule 3.5" Drives with Dock

1280MB Quantum Atlas	3 yr. warr.	\$469
2160MB Ultrastar ES	5 yr. warr.	\$669

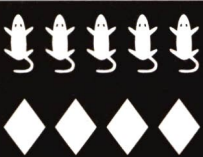
TOWER JOULE DRIVES



3.5" Drives with Mount

For use in Tower with a Joule Base.

1280MB Quantum Atlas	3 yr. warr.	\$469
2160MB Ultrastar ES	5 yr. warr.	\$669
4.3GB Quantum Atlas	5 yr. warr.	\$1099
Joule Bases - Supports Stacks Up To 6 Drives High		
2160MB Ultrastar ES HD	3 yr. warr.	\$699



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AWARD-WINNING
COLOR

Compare these features:

- Color previews in seconds.
- Scans in under a minute.
- The industry's leading scanning software.

"ScanPrep is an essential application if you own a scanner... the sort of program that has to be seen to be believed."

Ben Long - MacWeek

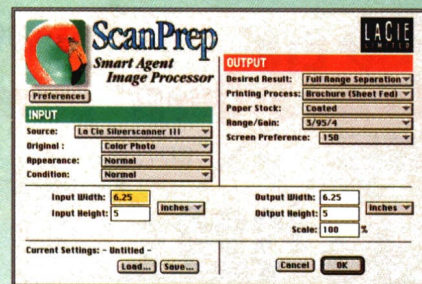
Highest Possible Rating



"No matter what acquired plug-in you get if you use Photoshop, you'll also want to buy a copy of ScanPrep."

- MacUser

Highest Possible Rating



FREE with all La Cie scanners, ScanPrep automates Photoshop's* image processing tools, individually preparing each image for printing right before your eyes. Simply describe the project to ScanPrep and scan the base image. ScanPrep yields professional prepress results, quickly and easily.

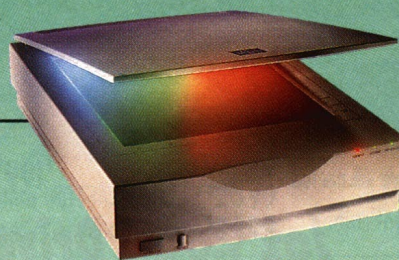
ScanPrep provides automatic adjustment of picture contrast and color saturation. Even when the original is lacking in contrast or saturation, it corrects the problem without human intervention.

SilverScanner PRO

24 bit color, 300 x 600 dpi
interpolated up to 1200 dpi.

- ▲ SilverScan
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

\$599



SilverScanner PRO with Photoshop LE

24 bit color, 300 x 600 dpi
interpolated up to 1200 dpi.

- ▲ Photoshop LE
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

\$669

SilverScanner DTP

30 bit color, 400 x 800 dpi
interpolated up to 3200 dpi.

- ▲ SilverScan
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

\$799



SilverScanner DTP with Photoshop LE

30 bit color, 400 x 800 dpi
interpolated up to 3200 dpi.

- ▲ Photoshop LE
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

\$889

SilverScanner III

30 bit color, 600 x 1200 dpi
interpolated up to 4800 dpi.

- ▲ SilverScan
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

\$1499



SilverScanner III with Photoshop Full

30 bit color, 600 x 1200 dpi
interpolated up to 4800 dpi.

- ▲ Photoshop (Full Edition)
- ▲ ScanPrep
- ▲ Omnipage Lite OCR

\$1659

Sheet Feeder Adapter (DTP and III)

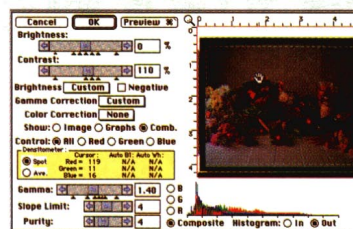
\$499

Transparency Adapter (DTP and III)

\$799

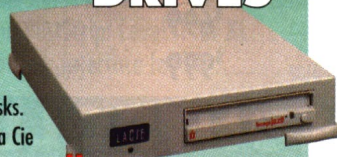
No matter which software bundle you choose, you'll also receive SilverScans' award-winning scanning software giving you professional scans.

* Full version only.



REMOVABLE DRIVES

- ▲ 1 GB of data on sturdy and compact 3.5-inch disks.
- ▲ Exclusive La Cie metal case includes power supply.
- ▲ Includes 3 cartridges!



\$699

JAZ 1GB w/3 Cartridges

SYQUEST EZ135MB 2 yr. warr. **\$118**
Includes ONE FREE cartridge! (\$18 Value)

SYQUEST EZFLYER 230MB **\$299**
Includes ONE FREE cartridge! (\$30 Value)

IOMEGA JAZ 1GB External **\$699**
Includes THREE FREE cartridges! (\$357 Value)

CARTRIDGES

	Qty. 1	Qty. 10
Jaz 1GB	\$119 ea.	\$99 ea.
Syquest SQ400 44MB	\$38 ea.	\$37 ea.
Syquest SQ800 88MB	\$42 ea.	\$41 ea.
Syquest SQ2000 200MB	\$62 ea.	\$61 ea.
Syquest SQ105 105MB	\$53 ea.	\$52 ea.
Syquest EZ135 135MB	\$18 ea.	\$17 ea.
Syquest EZFlyer 230MB	\$30 ea.	\$29 ea.
Syquest SQ3270 270MB	\$49 ea.	\$48 ea.
Optical 128MB	\$16 ea.	\$15 ea.
Optical 230MB	\$21 ea.	\$20 ea.
Optical 1.3GB	\$59 ea.	\$58 ea.
Optical 2.6GB	\$85 ea.	\$84 ea.
CD-R 74 650MB		\$8.90 ea.
DAT 90m	\$9 ea.	\$8 ea.
DAT 120m	\$24 ea.	\$25 ea.
DAT Cleaning Kit	\$9 ea.	\$8 ea.
DLT 30 30GB	\$40 ea.	\$39 ea.
DLT 40 40GB	\$98 ea.	\$97 ea.

CLEARANCE

90 day warranties.
Some drives are refurbished.
No rain checks. Quantity is limited to to stock on hand.
First come, first served.

HARD DRIVES	PRICE
730MB Quantum Internal (unformatted)	\$149
1.2GB 5.25" Seagate External	\$149
1.4GB Quantum Internal	\$259
2.2GB Quantum Internal	\$399
2.4GB Seagate Internal	\$399
4.0GB Quantum Internal	\$829
REMOVABLE DRIVES	PRICE
105MB SyQuest Internal	\$79
270MB SyQuest External	\$279

LACIE
LIMITED

INTERNAL HARD DRIVE

\$429

2160 MB
Ultrastar ES

EXTERNAL HARD DRIVE

\$327

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Quantum Fireball

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CLUBMAC REMOVABLE STORAGE



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Includes One Free Cartridge

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1044 1010

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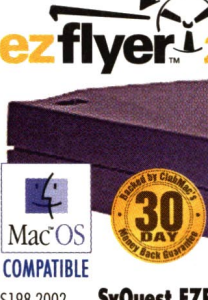
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Includes One Free Cartridge

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SyQuest Media

Part Number	Media	Qty 1	Qty 10	Qty 20
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S198 1011	88MB	\$44ea	\$43 ⁵⁰ ea	\$43ea
S198 1012	200MB	\$69ea	\$68ea	\$67ea
S198 1013	105MB	\$35ea	\$34 ⁵⁰ ea	\$34ea
S198 1014	270MB	\$57ea	\$56ea	\$55ea
S198 2010	EZ135MB	\$19ea	\$18 ⁵⁰ ea	\$18ea
S198 2011	EZ230MB	\$30ea	\$29 ⁵⁰ ea	\$29ea



\$35

\$69

\$44

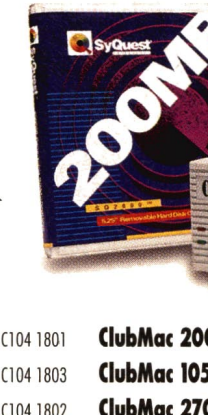
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5 YEAR WARRANTY



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\$329
C104 1801

ClubMac 200MB 5.25" Removable (Cartridge not included) \$329

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CLUBMAC HARD DRIVES

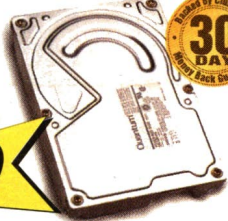


Quantum FIREBALL 1280MB

12ms Access Time

\$269

Internal Fireball C104 0001



TRAILBLAZER 850MB

14ms Access Time

\$189

Internal TrailBlazer C104 0002

Capacity	Model	Part No.	Internal	Part No.	External
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1280MB	Fireball 12ms	C104 0001	\$269	C104 0051	\$329
2170MB	Saturn 8.5ms	C104 0011	\$479	C104 0061	\$539
2150MB	Atlas 8ms	C104 0004	\$639	C104 0054	\$699
4280MB	Atlas 8ms	C104 0005	\$899	C104 0055	\$959



ATLAS 4.3GB

7200 RPM 1024K CACHE

\$899

Internal Atlas C104 0005



1280MB Fireball IDE C104 0012 **\$229**

1700MB Sirocco IDE C104 0009 **\$289**

2550MB Sirocco IDE C104 0010 **\$369**

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Quantum IDE hard drives are compatible with Quadra 630, Performa 5200/5300, and Performa 6200/6300 Series

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C104 1300 ClubMac 2.0GB ThunderDAT Drive	\$749
C104 1301 ClubMac 4-8GB DDS-2 DAT Drive	\$849
C104 1302 ClubMac 4-8GB Performance DAT Drive	\$1079
S100 1043 Sony QW3080XLF QIC/WIDE 2-4GB Cartridge	\$29
V010 1018 Verbatim 90M 4mm DAT Cartridge 2-4GB	\$9

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C104 1301

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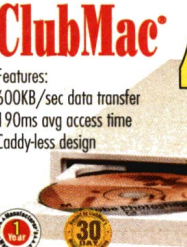
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ClubMac®

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- 21" .25m high performance DiamondTron display
- Color management support for AGFA FotoTune 1.0 & 2.0, Apple ColorSync 1 & 2, EFiColor, and Kodak Precision.
- .30mm Dot Pitch
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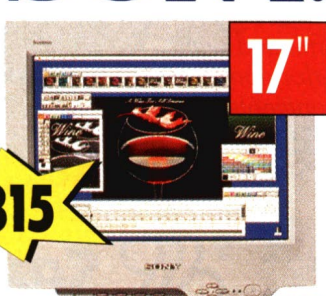
Radius IntelliColor 20e Display (R016 1009) \$1849

MultiScan 17SFI

FEATURES

- 16.0" Viewable image size
- 25 mm Aperture Grille Pitch
- Max Macintosh Resolution: 1024 x 768 75Hz
- On screen display of digital screen controls
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SONY



Sony Multiscan 17SFI (S106 1018) \$815
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- Monitor Manager
- AccuColor, Digital controls
- Energy star compliant for true energy savings



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17" MultiSync XV17+

Large Screen performance at an affordable price

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- FullScan capability
- On-Screen Manager

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- Cross-platform compatibility



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E040 1055 EpsonTalk Interface for XL \$139

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H047 1030 HP LaserJet 5MP Printer \$1045

HP DeskJet 855CXI InkJet Printer



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- Dual I/O for either PC or Mac connect
- Black print speed up to 7ppm
- Color print speed up to 3ppm
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H047 1065 HP DeskJet 855CXI InkJet Printer \$499

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- 600 x 1200 dpi resolution
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- Transparency Module
- Includes: Adobe Photoshop, AGFA FotoLook scanning software, FotoTune LE for color management

A055 1001 AGFA Arcus II Desktop Professional Scanner \$1995
A055 1011 AGFA StudioScan IIs \$699

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- Transparency adapter
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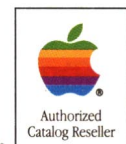
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200 MB	SQ5200	325	135 MB	19
270 MB	SQ3270	339	200 MB	69
			270 MB	56

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88 MB	44
135 MB	19
200 MB	69
270 MB	56

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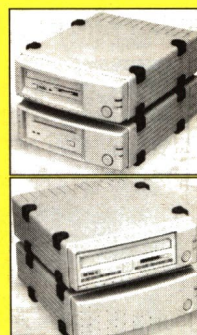


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	Platform	14/15"	16/17"	19/20"	21"		Platform	14/15"	16/17"	19/20"	21"		Platform	14/15"	16/17"	19/20"	21"
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Xceed Color 30hr	SE/30	256	256	256	256	Radius TPD Interface	Mac SE	—	—	—	Mono	RasterOps 24L	Nubus	Millions	—	—	—
Lapis Color 16	SE/30	Thousands	Thousands	256	256	RasterOps 8/LC	LC/PDS	—	—	256	—	RasterOps 8/LC	Nubus	—	—	256	—
Lapis Color 24	SE/30	Millions	Millions	256	256	SuperMac Spectrum 8	LC/PDS	256	256	256	256	SuperMac Spectrum 8	Nubus	256	256	256	—
Radius Direct Color/gx	Itsi	Millions	—	—	—	Lapis Color 16 for LC	LC/PDS	Thousands	Thousands	256	256	Double Color LX	Nubus	256	256	256	256
SuperMac Spectrum 8	Itsi	256	256	256	256	Micro Conversions 1724	LC/PDS	Millions	Millions	256	256	Radius Direct Color 24	Nubus	—	—	—	Millions
SuperMac Spectrum 8,24	Itsi	Millions	256	256	256	Lapis Color 24 for LC	LC/PDS	Millions	Millions	256	256	E-machines Futura MX	Nubus	Millions	Millions	Millions	—

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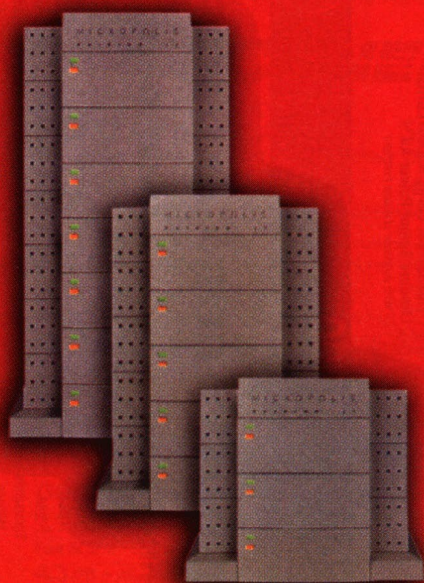
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2.0 GB	DT-4221	Micropolis	8.0 ms	5 yrs	\$599	\$675
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4.3 GB	DT-14207	Conner NEW PRODUCT!	8.0 ms	5 yrs	\$950	\$1,025
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4.3 GB	DT-3243AV	Micropolis NEW LOW PRICE!	8.5 ms	5 yrs	\$1,050	\$1,125
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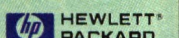
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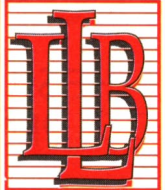
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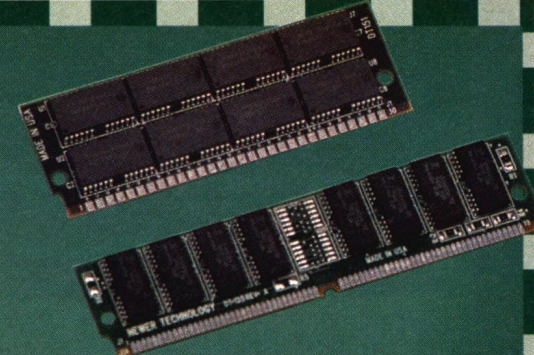
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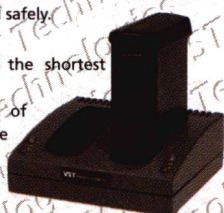
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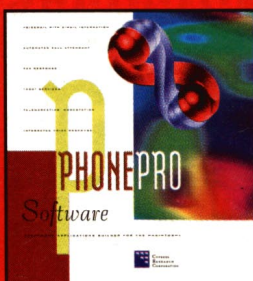
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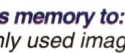
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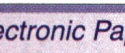
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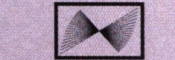
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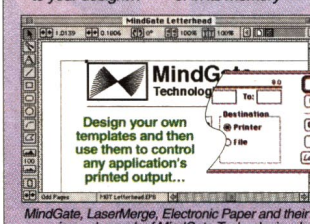
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☐ 01. Yes ☐ 02. No

1 What is your organization's primary business activity at this entire location? (Select one only) Write Answer Here ➡

- | | |
|---|---|
| Non-Computer Related | Computer Related |
| 01. Graphic Arts | 22. Manufacturer (Computers, Software, Peripherals) |
| 02. Publishing | 23. VAR, VAD, Systems/Network Integrator |
| 03. Advertising, Public Relations, Promotion | 24. Retailer/Distributor |
| 04. Digital Media Development | 25. Systems House/Data Processing Service |
| 05. Entertainment/Broadcast | 26. Computer Consultant |
| 06. Commercial Printer | 27. Other Businesses and Services |
| 07. Service Bureau/Pre-Press | 99. Other (please specify) |
| 08. Aerospace | |
| 09. Architecture, Engineering | |
| 10. Telecommunications | |
| 11. Government | |
| 12. Manufacturing | |
| 13. Education: College/University/Trade | |
| 14. Education: High School/Elementary | |
| 15. Finance: Banking, Accounting, Insurance, Real Estate, Legal | |
| 16. Health, Medical | |
| 17. Non-Computer Retailer, Wholesaler, Distributor | |
| 18. Research and Development | |
| 19. Agriculture, Mining, Construction, Oil | |
| 20. Transportation, Utilities | |

2 What is your job function? (Select one only) Write Answer Here ➡

- | | | |
|-----------------------------------|---|--|
| A. Networking/Data Communications | J. Communications/Publishing/Public Relations/Advertising | O. Administration/Management/Personnel |
| B. MIS/DP/Information Systems | K. Engineering/Architecture | P. Accounting/Finance/Legal |
| C. Systems Engineering | L. Science/Research & Development | Q. Sales/Marketing |
| D. Internet/WWW Site Development | M. Education/Training/Development | R. Purchasing |
| E. Telecommunications | N. Manufacturing/Operations/Production/Quality Control | S. Consulting |
| F. Graphic Arts/Design | | Z. Other (please specify) |
| G. Production/Pre-Press | | |
| H. Video Production | | |
| I. Audio Production | | |

3 Which of the following brands of systems and/or applications software do you have installed at this entire location? (Check all that apply)

- | | | |
|---|---|---|
| Operating Systems | Groupware | On-Line Services |
| ☐ 01. System 7 or higher | ☐ 16. Lotus Notes | ☐ 31. America Online |
| ☐ 02. Unix/Xenix/AUX/AIX | ☐ 17. Windows for Workgroups | ☐ 32. CompuServe |
| ☐ 03. Windows 3.x | ☐ 18. FirstClass | ☐ 33. Prodigy |
| ☐ 04. Windows NT | ☐ 19. Novell GroupWise | ☐ 34. Internet |
| ☐ 05. Windows 95 | ☐ 20. Other (please specify) | ☐ 35. Other (please specify) |
| ☐ 06. NeXTStep | | |
| ☐ 07. Solaris | | |
| ☐ 08. Other (please specify) | | |
| Network Operating Systems | Database Engines | Internet Services |
| ☐ 10. Novell NetWare | ☐ 22. FileMaker | ☐ 37. NetCom |
| ☐ 11. Unix/NFS | ☐ 23. Oracle | ☐ 38. EarthLink |
| ☐ 12. Banyan VINES | ☐ 24. Sybase SQL Server | ☐ 39. PSI |
| ☐ 13. AppleShare | ☐ 25. Ingres | ☐ 40. BEST |
| ☐ 14. DEC PathWorks | ☐ 26. Informix | ☐ 41. AT&T Worldnet |
| ☐ 15. Other (please specify) | ☐ 27. 4D Server | ☐ 42. BBN |
| | ☐ 28. DB2 | ☐ 43. GNN |
| | ☐ 29. Other (please specify) | ☐ 44. Other (please specify) |

4 Please indicate the quantities of the computers currently installed and indicate the computers planned for purchase in one year at this entire location.

(Write in accurate quantities for all that apply.)	Currently Installed (Quantity)	PLAN TO PURCHASE
Macintosh/Compatible		
Apple Power Mac 8500, 9500	1.	1. ☐
Apple Power Mac 7500, 7600	2.	2. ☐
Apple Power Mac 7200	3.	3. ☐
Apple Nu-Bus Based Power Mac	4.	4. ☐
Power Computing	5.	5. ☐
Daystar Digital	6.	6. ☐
Other Power Mac Compatible	7.	7. ☐
Macintosh Quadra, Centris	8.	8. ☐
Macintosh Performa	9.	9. ☐
Non PPC Mac PowerBook/Duo	10.	10. ☐
PPC Mac PowerBook/Duo	11.	11. ☐
Macintosh Other (II, LC, SE, etc...)	12.	12. ☐
Other Mac Compatible	13.	13. ☐
Other Desktops		
Intel/Compatible Desktop/Laptop/Notebook	14.	14. ☐
PowerPC (Non-Mac Compatible)	15.	15. ☐
Workstation (SPARC, MIPS, HP/Apollo, etc.)	16.	16. ☐
Other Microcomputers	17.	17. ☐

5A How many servers are installed at this entire location? (Use numbers only)

5B How many LANs are installed at this entire location? (Use numbers only)

5C How many Macintoshes are connected to the LANs indicated in Question 5B above? (Use numbers only)

6A Does this location retail, resell, distribute, or function as a professional consultant for Macintosh-related products or services? ☐ YES ☐ NO

6B If you indicated YES in question 6A above, which of the following product or service categories are sold, resold, distributed or recommended at this entire location? (Check all that apply)

- | | |
|---|---|
| ☐ 01. Host Systems (Mainframes/Minis) | ☐ 04. Peripheral Equipment |
| ☐ 02. Desktops/Portables (Micros/Workstations) | ☐ 05. Software Products |
| ☐ 03. Networking Products (include Servers) | ☐ 06. Service/Support |

7A Which of the following Macintosh-related products do you specify, recommend, buy or approve the purchase of? (Check all that apply)

- | | | |
|--|---|--|
| Systems | ☐ 20. Communication/Network Software | ☐ 41. Presentation Systems |
| ☐ 01. Apple Macintoshes | ☐ 21. Bridges/Routers/Gateways | |
| ☐ 02. Mac Compatibles | ☐ 22. Hubs | Peripherals |
| ☐ 03. Intel Compatible Micros | ☐ 23. NICS | ☐ 43. UPS |
| ☐ 04. Intel Servers | ☐ 24. Laser | ☐ 44. External Speakers |
| ☐ 05. Workstations | ☐ 25. InkJet | ☐ 45. Input Devices |
| ☐ 06. Minis/Mainframes | ☐ 26. Color Laser | ☐ 46. Video Deck |
| ☐ 07. PDAs | ☐ 27. Image Setter | ☐ 47. MIDI |
| ☐ 08. Pen-Based Computers | ☐ 28. Dye Sub | |
| Networking/Internet | ☐ 29. Thermal Wax | Storage |
| ☐ 10. Internet Servers/Web Servers | ☐ 30. Plotter | ☐ 49. Removable Storage |
| ☐ 11. Mac Compatible | | ☐ 50. Magneto Optical |
| ☐ 12. Intel Compatible | Image Input | ☐ 51. RAID |
| ☐ 13. Workstations | ☐ 33. Digital Camera | ☐ 52. Hard Drive 1 Gig + |
| ☐ 14. LANs | ☐ 34. Flatbed Scanners | ☐ 53. Hard Drive < 1 Gig |
| ☐ 15. WANs | ☐ 35. Handheld Scanners | ☐ 54. CD Recorder |
| ☐ 16. Mac to PC Links | ☐ 36. Slide Scanners | |
| ☐ 17. Mac to Mini/Mainframe Links | ☐ 37. Drum Scanners | Add-In Boards |
| ☐ 18. Mac to Unix Workstation Links | Displays | ☐ 56. Memory Boards |
| ☐ 19. Modems | ☐ 39. 14 - 17 inch | ☐ 57. Display Boards |
| | ☐ 40. 19 + inch | ☐ 58. Accelerator Boards |
| | | ☐ 59. Video Capture/Compression |
| | | 99. None of the above |

***** Indicate additional individuals at this location who might qualify for a **FREE** subscription to **MacWEEK:**

Name _____	Title _____
Name _____	Title _____
Name _____	Title _____

7B Which of the following systems and/or applications software do you specify, recommend, buy or approve the purchase of? (Check all that apply)

- | | | |
|---|---|---|
| Graphic Arts/Publishing | ☐ 23. VRML Authoring Tools | ☐ 42. Databases |
| ☐ 01. Desktop Publishing | ☐ 24. Web Publishing Tools | ☐ 43. Project Management |
| ☐ 02. Electronic Publishing | ☐ 25. Firewalls/Security | ☐ 44. Accounting/Payroll |
| ☐ 03. Painting/Drawing Programs | ☐ 26. Transaction Processing | ☐ 45. Groupware |
| ☐ 04. Photo Retouching | ☐ 27. Database Connectivity | ☐ 46. Desktop Video Conf. Management |
| ☐ 05. Page Layout | ☐ 28. Other (please specify) | ☐ 47. Document Management |
| ☐ 06. Illustration Programs | | ☐ 48. Mapping/GIS |
| ☐ 07. Fonts | | ☐ 49. Pen-Based Applications |
| ☐ 08. Pre-Press | | ☐ 50. Other (please specify) |
| ☐ 09. Color Management | Presentation Graphics | Systems Management |
| ☐ 10. Digital Video | ☐ 30. Presentation Software | ☐ 52. Operating Systems |
| ☐ 11. Other (please specify) | ☐ 31. Multimedia Presentations | ☐ 53. Utilities |
| Multimedia | ☐ 32. Charting Program | ☐ 54. Applications Development |
| ☐ 13. Authoring Software | ☐ 33. Other (please specify) | ☐ 55. CASE |
| ☐ 14. Video Editing | | ☐ 56. Programming Languages |
| ☐ 15. Sound Editing | Design/Engineering | ☐ 57. Compilers |
| ☐ 16. Music Composition/Editing | ☐ 35. CAD/CAM | ☐ 58. SQL Applications |
| ☐ 17. Animation | ☐ 36. 2/D - 3/D Modeling | ☐ 59. Client Server Applications |
| ☐ 18. Clip Media (Sound and Art) | ☐ 37. Simulation | ☐ 60. Other (please specify) |
| ☐ 19. Other (please specify) | ☐ 38. Other (please specify) | 99. None of the above |
| Internet/WWW | Business Applications | |
| ☐ 21. Browsers | ☐ 40. Word Processing | |
| ☐ 22. HTML Authoring Tools | ☐ 41. Spreadsheets | |

8 In which ways do the Macintoshes at your location connect to the Internet? (Check all that apply)

- | | |
|---|---|
| ☐ 01. Analog Modems | ☐ 05. ATM |
| ☐ 02. ISDN | ☐ 06. Wireless Modems |
| ☐ 03. T-1/T-3/Fractional T-1 | ☐ 99. Other (please specify) |
| ☐ 04. Cable Modems | |

9 If you indicated purchase involvement for computers, computer products or services in Question 7A or Question 7B, for how many Macintoshes do you have this involvement? (Select one only) Write Answer Here ➡

- | | | | | |
|---------------|-------------|-----------|-----------|----------|
| 01. 2000+ | 03. 500-999 | 05. 50-99 | 07. 10-19 | 09. 1-4 |
| 02. 1000-1999 | 04. 100-499 | 06. 20-49 | 08. 5-9 | 99. None |

10 For what applications are the Macintoshes at your location used? (Check all that apply)

- | | |
|--|---|
| ☐ 01. Graphic Arts/Publishing | ☐ 05. Business Applications |
| ☐ 02. Presentation Graphics | ☐ 06. Systems Management |
| ☐ 03. Multimedia | ☐ 07. Internet Development |
| ☐ 04. Design/Engineering | ☐ 99. Other (please specify) |

11 Over the course of one year, do you specify, recommend, buy, sell, resell or approve the purchase of host systems, desktops, networking products, peripheral equipment and/or software worth: (Check one box per column)

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\$5,000,000 to \$9,999,999	2. ☐	15. ☐	28. ☐	41. ☐	54. ☐	67. ☐
\$2,500,000 to \$4,999,999	3. ☐	16. ☐	29. ☐	42. ☐	55. ☐	68. ☐
\$1,000,000 to \$2,499,999	4. ☐	17. ☐	30. ☐	43. ☐	56. ☐	69. ☐
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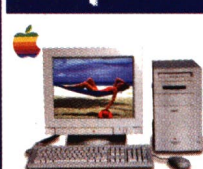
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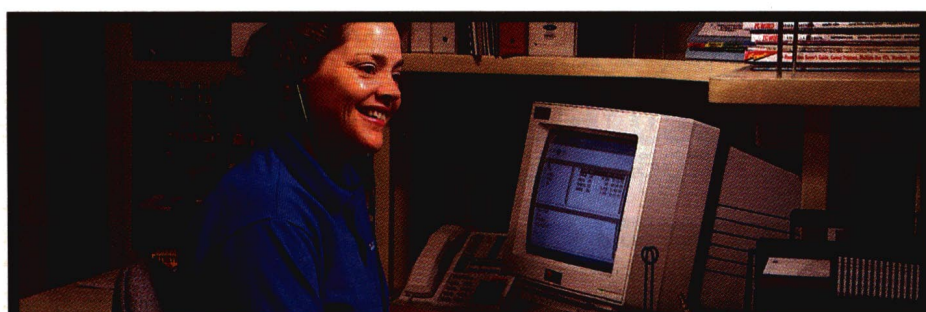
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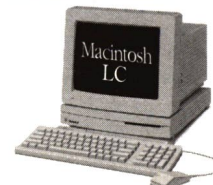
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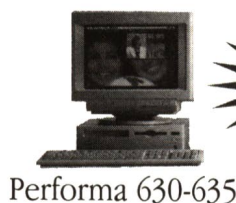
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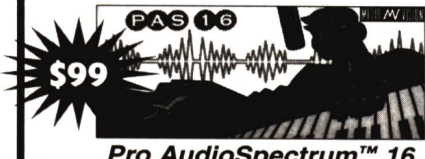


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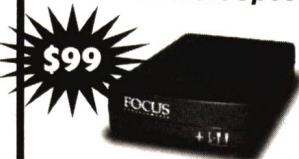
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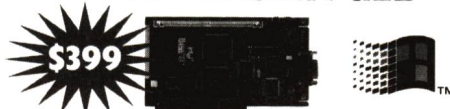


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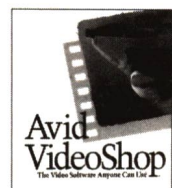
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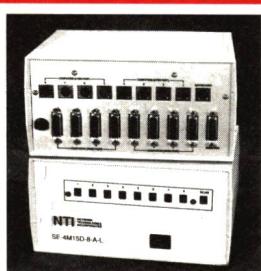
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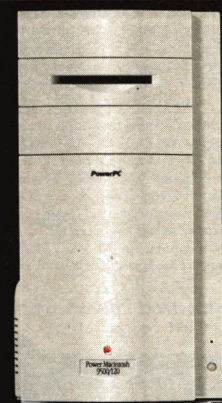
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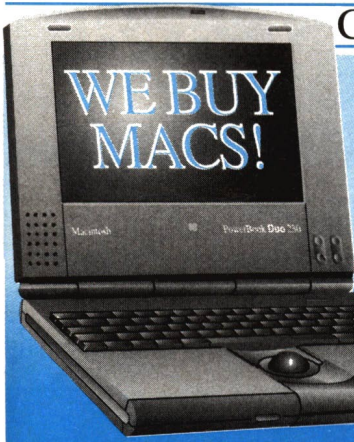
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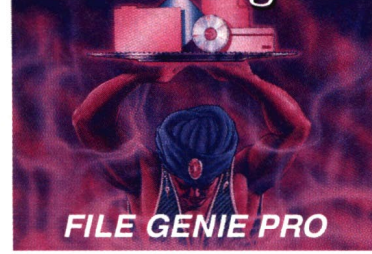
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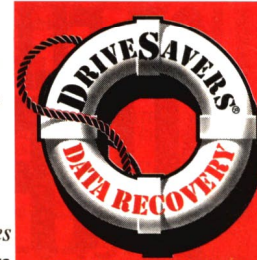
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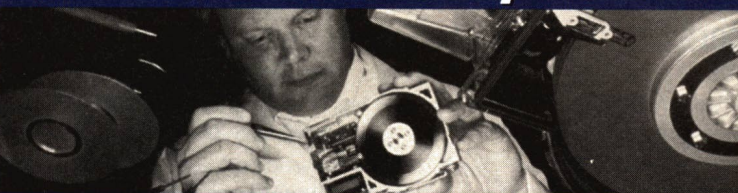


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Nexpo

From Page 1

In general, however, Porter said he felt that nothing in Las Vegas created a real buzz. "There were some movements in the technology, most of the products pushed ahead," he said. "There were one or two things that caught my eye. But there wasn't anything that blew everyone's socks off."

The vendors on hand had plenty of Mac products on display:

► **CCI Europe** of Højbjerg, Denmark, showed three new versions of its newspaper-production systems that use a Windows NT server and multiplatform clients. CCI NewsDesk Editorial coordinates the work of the news and copy desks with the art department. CCI also showed a pre-release version of AdDesk, a system for display advertising that will support Mac clients. The CCI NewsDesk Pagination system gained new Mac-based workstations for production of images and infographics, magazines, and Internet sites.

The company said pricing for its systems depends on configuration.

► **System Integrators Inc.** of Sacramento, Calif., showed off its Mac-based SIAM extension for the proprietary SIIMac publishing system. SIAM lets SIIMac users communicate directly with Multi-Ad Services Inc.'s Multi-Ad Creator. SII also showed MediaVu, a Mac text- and graphics-archiving utility that can access virtually all information stored on SII systems, according to the company. Pricing was not available.

► **Synaptic Micro Solutions Co-Op** of Appleton, Wis., showed three \$750 XTensions designed to provide a task-specific interface for Mac users connected to Synaptic's proprietary SunType pagination systems. ClassLink and NewsLink categorize and list classified ads or editorial content and flow them into an XPress document. DummyLink positions display ads before they are produced, then provides a reference link to import the completed files.

► **Baseview Products Inc.** of Ann Arbor, Mich., introduced PageWatch IQue, software for tracking XPress pages. Slated to ship in October for about \$500, PageWatch IQue will present thumbnail views or page listings along with color-coded progress indicators. Also due this fall is Baseview's \$1,595 AdManagerPro, a WYSIWYG update to the company's software for classifieds.

Both Baseview and Freedom System Integrators Inc. of Wichita, Kan., announced plans to distribute in the United States Phraséa, a Mac-based client-server multimedia archiving system from MViParenthesis of Lille, France.

► **T/one Inc.** of Quincy, Mass., displayed Version 3.0 of its \$52,000 Merlin Archive database system, a Windows NT archiving system for text, pictures and graphics, as well as Merlin Lite 3.0, which lists for \$35,000 with a scaled-down server. Both versions support Mac and Windows clients. A Web-enabled interface, the \$10,000 Merlin Webmaster, supports intranet or Internet access to Merlin Archive systems via any HTML-compliant browser.

The company also demonstrated its \$1,000 RoboWRAP! imaging engine, which

taps the UserLand Frontier scripting language to customize and automate picture-routing, proofing and file-conversion tasks.

► **Media Marketing Inc.** of Boulder, Colo., introduced imMEDIATE, an ad-sales automation package for the Mac and Windows. The system ranges from \$20,000 to \$500,000. It includes a calendar, to-do list and marketing encyclopedia.

► **Autologic Information International Inc.** of Thousand Oaks, Calif., showed the

APS Grafix RIP, which runs on Power Macs and Unix platforms. The company also showed Ad Manager, a work-flow management system for ad production that uses Mac and Windows clients. It demonstrated a forthcoming Internet component for posting ads on the Web.

► **Lexis-Nexis** of Dayton, Ohio, showed NewsView 4.0 and PhotoView 4.0, a pair of cross-platform archiving systems that feature Macintosh clients and can be

searched via Internet browsers.

► **Multi-Ad Services** of Peoria, Ill., showed a pre-release version of Bookman, its database-publishing system for creating phone directories. Due in July, Bookman will coordinate pagination, ordering, accounts receivable and scheduling for multiple phone books. Multi-Ad said it hopes to get newspaper publishers interested in the directory business by integrating Bookman with their existing systems. □

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PPCP

From Page 1

The demonstration ran an unreleased version of System 7.5.3, code-named Bloom County, that has been altered to work on PowerPC Platform, or PPCP, machines. The OS-in-progress included CHRP System Enabler 1.0. The demonstration featured several Mac applications, including Claris FileMaker Pro and Adobe Photoshop.

IBM also showed Long Trail, its first-generation PPCP licensing design. The final version of the logic board will be available in late August, the company said. IBM and Motorola said the PPCP version of the Mac OS is expected to arrive at the same time as complete systems — by the end of 1996 or early in the first quarter of 1997.

According to David Ryan, Essex Junction, Vt.-based product line marketing manager with IBM Microelectronics Division, Long Trail will let developers pick between the processor daughtercard design used with many PCI Power Macs and the pin-grid array processor packaging used for many Intel-standard PC clones. PowerPC 603e and 604e processors will offer the same pin array, but higher-performance models will tend toward the daughtercard architecture, Ryan said.

The Long Trail board will be built around the ATX layout used in many desktop PC systems. It will also support low-cost EDO (extended data-out) memory on DIMMs as well as high-end DIMMs with synchronous RAM buffers.

In addition, Long Trail will use several chips from VLSI Technology Inc. of San Jose, Calif. Unveiled at the show were Golden Gate II, a pair of PCI-to-processor chips; the Tollgate ISA-to-PCI bridge chip; and Pier39, a Mac-to-PCI bridge chip. IBM's board will use VLSI's off-the-shelf VL82C976 GraphiCore graphics chip.

The Long Trail system shown offered both PC and Mac I/O, unlike previous prototype boards that had the Mac I/O on a separate add-in card. Ryan said clone vendors expected most users to run the Mac OS, so it was more cost-effective to put ADB and Fast SCSI-2 ports on the logic board.

Mark Ireland, hardware products program manager with IBM Microelectronics, said most clone vendors will differentiate systems "south of the border," or with variations of Mac and PC I/O. For example, manufacturers could add chips to the logic board to support Universal Serial Bus or FireWire peripherals. Mac-capable PPCP systems will require an ISA-to-PCI bridge chip to link an internal Enhanced-IDE (Integrated Drive Electronics) hard drive, PC-style ROM BIOS, keyboard and mouse. However, Mac-only systems will not need an actual ISA slot, Ireland said.

In related news, Motorola said the PowerPC partners will smooth the process for PPCP certification. Instead of requiring testing for desktop models with all the PPCP OSes, clone vendors will be able to pick two. Server vendors need only qualify one OS.

"The acid test is the Mac OS," said Stan Tims, PowerPC group marketing manager for Motorola in Austin, Texas. He said most vendors are used to Windows NT and AIX qualification.

According to Ryan, PPCP systems will cost less to produce than current PC clones. He also said PC-clone developers are interested in the continued brand loyalty of Mac users, the growing size of the Mac market and the advanced level of Mac technology.

"We're having to do some education on the Mac market," Ryan said. "People out in the PC world are surprised at the technology and the advanced state of the platform." □

Newton shines at PC Expo

New York — What's the Web address of the city that never sleeps? Answer: www.screw-you.com.

That joke making the rounds at PC Expo here last week revealed the mood of attendees and vendors. Ignoring the usual summer dose of hot rain and traffic snarls, more than 120,000 attendees turned out for the show. While the Internet buzz drew many walk-ins, several of them were discouraged by long check-in lines that required a wait of more than two hours.

While the Mac played only a supporting role in this summer-stock production, second-string Apple technologies, such as the Newton and Pippin, gained the lion's share of the applause.

Apple took the wraps off the LaserWriter 12/640 PS and Apple Remote Access 2.1. However, it was the company's vertical-market strategy for the Newton that earned the respect of the business-oriented PC Expo crowd.

The Expo was the coming-out venue for the Newton Internet Enabler 1.0; the software lets Newton OS 2.0-compatible PDAs connect with TCP/IP networks for services such as Web access and e-mail. The Newton Internet Enabler 1.0 is available at <http://dev.info.apple.com/newton/newtondev.html>.

"The enabler is great for basic stuff, attached files, text and stock prices, but it's not the full Internet experience," said Wendell Thomas, MIS manager at ad agency Arnell Group Ltd. based here. He said he expects to offer his clients Landware Inc.'s \$49 X-Port file transfer

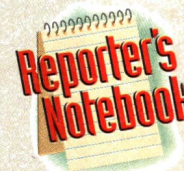
utility in addition to e-mail. "My boss hates to carry her notebook around."

Newton developers took the spotlight with a raft of Internet-savvy products, including Web browsers and e-mail clients. Qualcomm Inc. demonstrated its unpriced Eudora Pro for Newton, which is due in the third quarter. The e-mail software works with the company's forthcoming Data on the Go PC Card modem and cellular-phone combination for remote messaging; the hardware package will cost from \$350 to \$400.

Offering Newton connections to the Web, AllPen Software Inc. of Los Gatos, Calif., released \$49.95 NetHopper 2.0, a forms-capable browser that supports several wireless modems. The team of Steve Weyer and Greg Simon introduced its \$35 Newt's Cape Version 1.3 browser, which can create and save Web pages in NewtonBook format.

Both Internet and intranet capabilities drew attendees' interest to Bandai Digital Entertainment Corp.'s forthcoming Pippin @World. The device was shown running Web-browser software.

Hoping to replace ordinary computers with the lower-cost Pippin players, some IS managers needed heavy-duty education on the pint-size platform. Several would-be buyers left in a huff after hearing the news that Microsoft's Excel and Word productivity applications were not on the compatibility list — as if any user would really prefer to view their spreadsheet on a television. Go figure. — *By David Morgenstern*



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Landi

From Page 1

from product development and planning to marketing and human resources, Landi said. Each group's success will be assessed by looking at the bottom line.

"I cannot measure by any other method than profit," Landi said.

Measurability and accountability were the key themes of Landi's talk, specifically in the context of the many mistakes he said Apple made in the past few years, including poor product focus and forecasting shortfalls. Landi placed most of the blame on the old structure's confusing lines of command, which didn't give product managers the wherewithal to make decisions quickly.

He said Apple had "restructured the business units to have all of the function they need to make quick decisions."

The new structure will also help Apple evaluate its return on investment for the R&D, production and marketing costs of new products. Taking aim at the company's chief systems competitor, he added, "The Macintosh division will be able to compete in the same field as Compaq [Computer Corp.]."

Under the old structure, Apple's product-design process "became too complicated," Landi said, so now the company will focus on perceived value for users. Amelio recently formed several special groups to examine value; redefine OS strategy; and uncover cost savings, such as the outsourcing of manufacturing.

With regard to the Information Appliances division, Landi said that Apple is "rethinking how to use best the Pippin and Newton technology." Apple had "already introduced the Network Computer" in Pippin, he said, referring to Oracle Corp.'s recently released guidelines for low-cost Internet computers (see 05.27.96, Page 1).

Landi forcefully denied reports that Apple was abandoning the enterprise market, saying that "we cannot afford to get out of anything."

Landi also reported that he and Amelio had dined with Microsoft Corp. Chairman Bill Gates last week. While he declined to give specifics of their discussions, he said Apple needed to work better with Microsoft.

"We live in a world where your toughest competitor must be your best partner," Landi said. □

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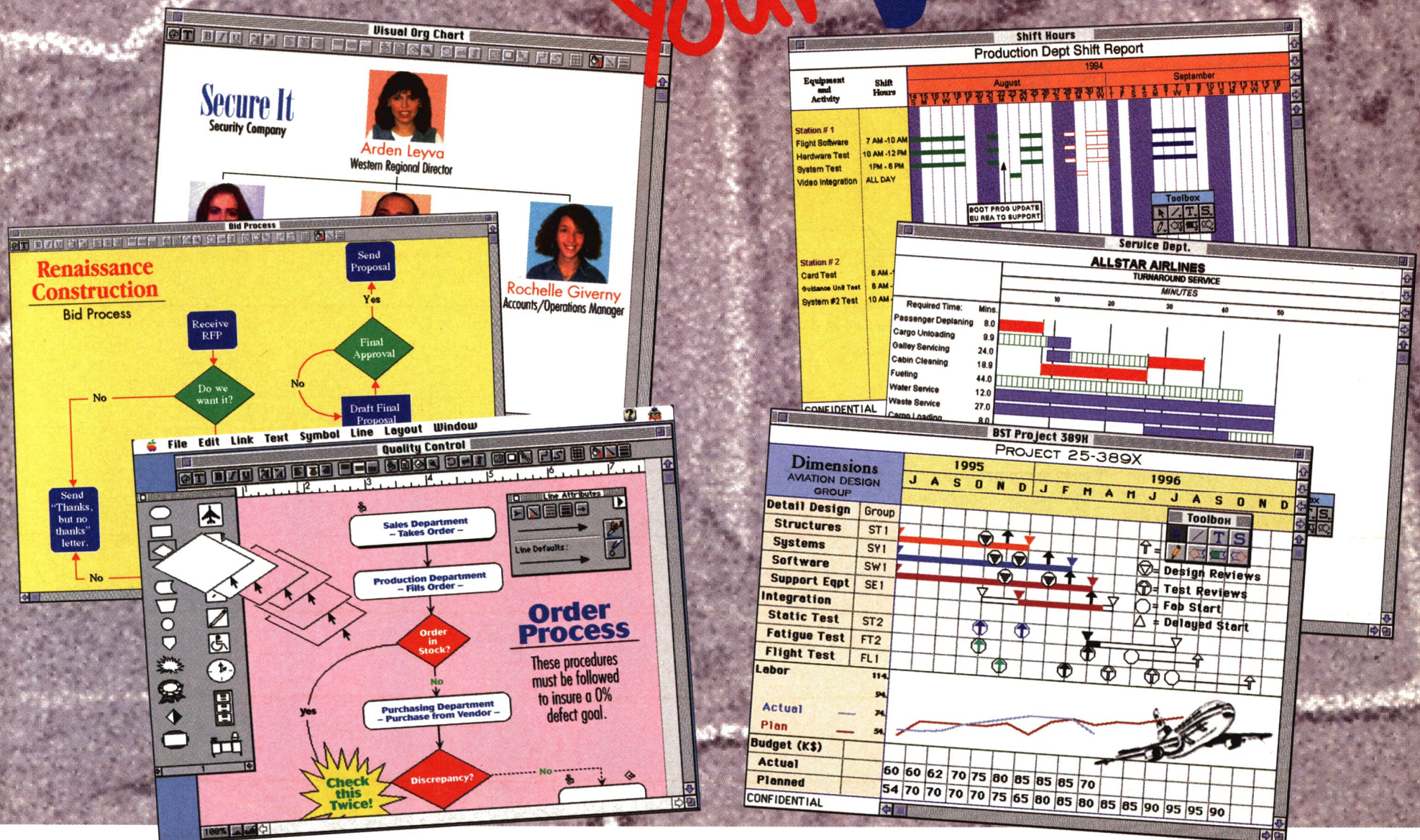


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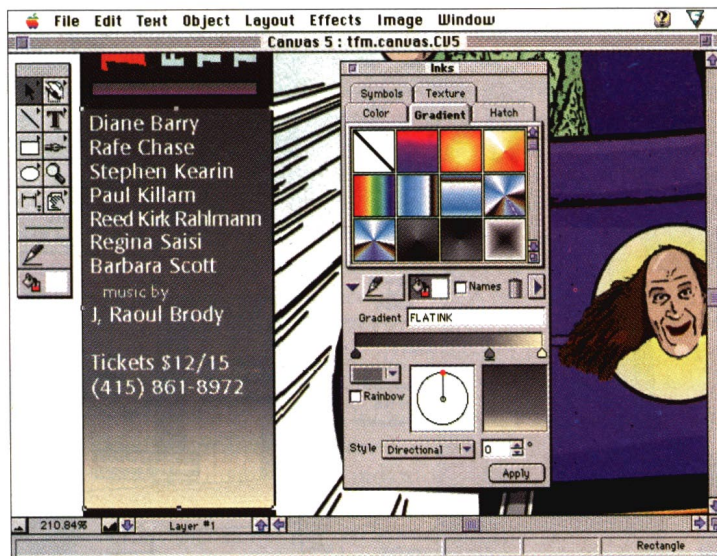
Canvas

From Page 1

In particular, the completely re-coded Canvas has the necessary memory management to handle huge bit maps — something the competition cannot claim.

Canvas' reworked interface includes tabbed, floating palettes and interactive help. But the biggest change is the inclusion of different interface metaphors. Whereas other programs provide a single metaphor for a document — Illustrator's page-on-a-pasteboard metaphor, for example — Canvas gives you a choice. The New command brings up a dialog box with selections for Illustration, Publication or Presentation. Illustration documents look just as you would expect in an illustration program. Publication and Presentation documents, however, present an interface closer to Adobe PageMaker and Microsoft PowerPoint, respectively.

Whichever metaphor you choose, all the drawing tools and palettes are available. Deneba has done an extraordinary job of im-



Canvas 5's gradients can be applied to strokes or fills and include the unique Rainbow switch, which eliminates muddy, darker colors from gradients.

plementing this feature, presenting an intuitive way of using the same tools to create different kinds of documents.

Swiss army program

Canvas provides an astonishingly complete toolbox of all the expected PostScript editing tools. In

addition, it offers complete Boolean editing features, 3-D extrusion tools and autotracing. Many CAD-influenced tools, such as automatic dimensioning tools, hatch patterns and multiple layers, are there, too. You can also import 3DMF (3-D metafile format) models with Apple's stan-

dard controls for changing rotation, scaling and positioning.

Experienced Illustrator and FreeHand users will need to get used to Canvas' Editing mode. Before you can edit a shape, you must double-click it to make it active. After editing, double-clicking again finishes the edit. Further, shapes don't display their fill attributes in Edit mode, so you can edit a shape only in Outline mode; this makes it hard to accurately resize a shape with a fat stroke, for example. On the plus side, a separate Edit mode means you can quickly and easily grab and move shapes without worrying about grabbing just a handle or part of a shape.

Canvas' fill and stroke capabilities are better than the competition's. Not only can you fill shapes with single colors, patterns or gradients, you can also fill strokes with any of these properties.

Full style sheets are provided for all object properties, and a unique macro capability lets you create an object and then place instances of the object anywhere on

the screen with just a mouse click. Similar to style sheets, changes to the source object are applied to all instances based on that object.

No other illustration program matches Canvas' breadth of tool selection, but competitors do have something Canvas lacks: a plug-in architecture. Canvas 5 doesn't work with Adobe or Macromedia's plug-in illustration APIs.

The writing on the screen

While Illustrator and FreeHand provide powerful, but limited, layout and desktop publishing features, Canvas offers a full DTP environment with everything you need for simple projects. Full-featured typographic controls include widow and orphan control, style sheets for paragraphs and characters, and automatic drop caps. Text blocks flow one to the next à la PageMaker, and text blocks can be joined with a Link tool similar to QuarkXPress'.

As with any other Canvas object, text can be filled or stroked

See Canvas, Page 73

CompuServe

From Page 1

Smart Rules services, available now to MacCIM 2.4.3b users, are included with the standard \$9.95 monthly CompuServe membership. Use of the voice service is billed at 25 cents per minute.

Members who sign up for the services will receive a CompuServe Communications Card, a long-distance calling card that provides them with a toll-free number for accessing their e-mail accounts. Users can choose to have all their mail accessible by phone or specify only high-priority messages. The calling

card can also be used as a standard long-distance calling card that will be billed to the member's CompuServe account.

After listening to an e-mail message, users will be able to reply with one of five preset responses. Premiere said users will be able to customize these replies through a Web site later this year and choose from as many as 900 canned messages.

To enable this technology, CompuServe is updating its e-mail server. Other enhancements, such as improved support for MIME (Multipurpose Internet Mail Extensions) and better

enclosure handling, are expected to be delivered through the new mail system. CompuServe said it will provide mail-filtering services later this year that will reply automatically to messages, file mail in multiple folders, and forward them to other e-mail addresses or to a fax machine.

While smaller communications companies have offered similar services, this is the first time e-mail-by-phone services have been made available to such a large installed base of customers as part of their basic service. CompuServe has more than 6 million users.

Besides receiving e-mail, users can also receive news, weather and sports updates or stock quotes via phone or pager.

CompuServe said it will soon let members listen to messages posted in discussion forums and access other types of data, such as local traffic updates. Premiere said users will be able to receive information from the Internet via phone or pager as well.

The two companies also plan to expand the services accessible by computer. For example, members will be able to listen to voice-mail messages and view faxes received by their Communications Card accounts.

Members can sign up for the new services at go.cis:callcard or by dialing (800) 211-8871.

CompuServe Inc. of Columbus, Ohio, can be reached at (614) 457-8600; fax (614) 457-0348; <http://www.compuserve.com>. □

No updates for MacNav

As a result of CompuServe Inc.'s planned migration to Internet standards, the company said it will stop development on CompuServe Navigator for the Macintosh, an offline reader for the on-line service.

CompuServe said it will not release any more Navigator, or MacNav, updates because the service is phasing out HMI (Host Micro Interface), the proprietary protocol on which both CompuServe and MacNav are now based.

"We're not saying that we're not going to support it,"

CompuServe spokesman William Giles said. "We're not going to do any further development on it."

MacNav was written by Mike O'Connor of Leptonic Systems Inc. in Huntington Station, N.Y.; CompuServe sells the product for \$24.95.

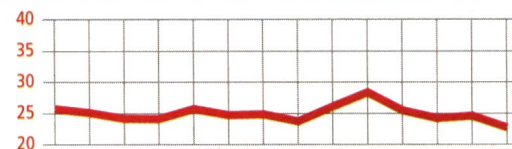
In a post on CompuServe, O'Connor said he may gain the right to publish MacNav himself, but he said, "my plans for major updates ... have to be reconsidered due to the fact that all HMI programs will be gone at some point."

—By Joanna Pearlstein

StockWatch

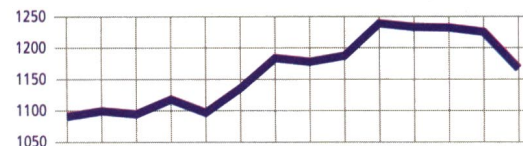
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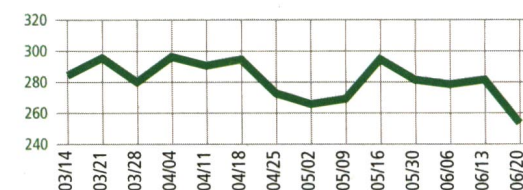
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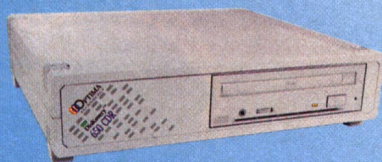
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Apple	22.75	-1.88	PERIPHERALS VENDORS		
MacWEEK			AmeriQuest	0.88	-0.06
Composite*	253.84	-28.12	Asanté	7.13	-0.63
SOFTWARE DEVELOPERS			Focus	2.50	-1.38
Adobe	36.13	-1.13	Global Village	9.75	-1.00
Caere	11.38	-0.75	HP	95.13	-5.88
CE Software	2.13	-0.25	QMS	5.88	-0.13
Fractal	14.25	-3.38	Radius	3.00	0.38
Graphsoft	7.38	0.75	Shiva	69.75	-15.88
Insignia	8.25	-2.13	Tektronix	41.50	4.13
Intuit	49.25	-3.50	Truevision	6.13	-1.13
Macromedia	27.00	-2.75	DISTRIBUTORS		
Microsoft	121.75	-2.88	CompUSA	36.75	-0.50
Novell	14.00	0.00	IE	9.06	-1.06
Oracle	34.88	0.50	Merisel	4.19	0.00
Symantec	12.50	-1.81	Tech Data	20.38	-1.88
STORAGE			INDUSTRY INDICATORS		
Iomega	30.88	-8.31	Compaq	47.88	0.75
Pinnacle	7.00	-1.25	IBM	100.75	-2.50
Quantum	15.25	-0.88	Intel	71.13	-3.88
Seagate	46.75	-1.63	Motorola	63.63	-1.25
SyQuest	9.44	0.38	SGI	25.13	-1.25
			NASDAQ	1167.34	-58.31

*The MacWEEK Composite is calculated by adding the stock prices of the following companies: Apple, Adobe, Asanté, Caere, CE Software, Global Village, Intuit, Macromedia, Radius, Shiva, SyQuest and Truevision. Source: Nordby International Inc.



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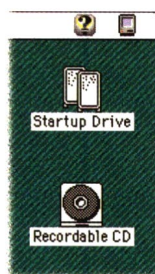


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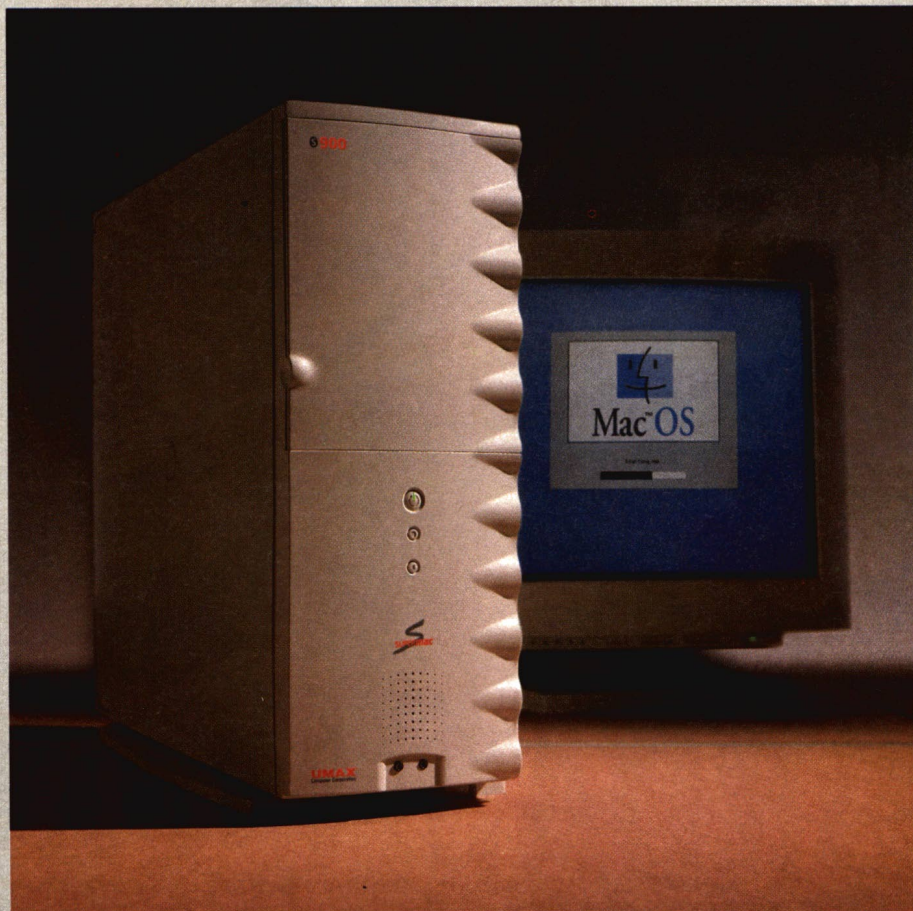


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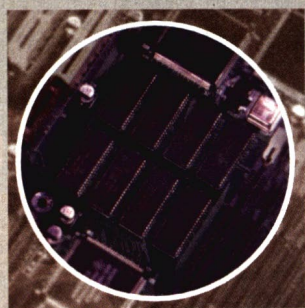


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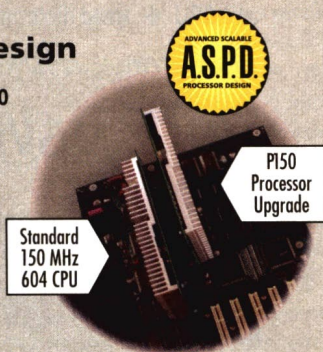
Designed from the ground up specifically to meet the needs of the design professional. We've kept all the best things you like — the familiarity and ease-of-use of Mac OS and compatibility with all your favorite software — wrapped it all up with the raw power of a 604 150MHz PCI-based design and delivered it at a price that can't be beat. Many unique features of the new S900 have been designed to specifically eliminate performance bottlenecks that have long troubled the market.



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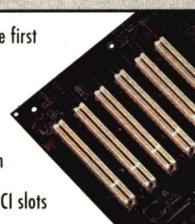
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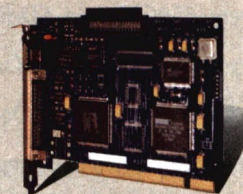
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Canvas

From Page 1

with gradients, patterns or hatches. Canvas text always stays editable, no matter what you've done to it.

Following FreeHand and Illustrator's lead, Canvas can now edit and manipulate bit-mapped graphics. However, Canvas' raster features are speedy enough for any type of work — bit maps in Canvas are actually *usable*. Where FreeHand and Illustrator choke on large bit-mapped images, Canvas handles them with almost the same performance you'd expect from Photoshop.

Canvas provides a full set of Photoshop-inspired tools as well as complete selection and color-correction tools. You can drag bit-mapped objects on screen and layer them with vector-based objects. (Canvas doesn't support multiple layers within a bit-mapped object, though.) Editing a bit map activates the Image menu, which contains a full suite of Photoshop-based commands, including Levels, Curves and Photoshop filters.

Deneba offers complete color and separation controls, including support for Pantone, Trumatch and Toyo color-matching systems; UCR and GCR ink controls; and trapping support. Canvas is also the first vector-based draw program to provide a Photoshop-like CMYK preview mode.

While Canvas' illustration tools seem as speedy as FreeHand's or Illustrator's, not everything in the program worked smoothly: We encountered numerous bugs, ranging from screen-redraw problems to hangs, crashes and inoperative features. Our beta also lacked Deneba's proposed plethora of templates and presets.

Conclusions

These are interesting times for the high-end illustration market, with both Canvas and Corel Corp.'s CorelDraw 6.0 (see 05.27.96, Page 1) trying to gain entry. Canvas stands a better chance than Corel, which seems underpowered by comparison.

While it needs some fine-tuning before its release, Canvas 5 looks like it will be a strong contender. Our beta successfully beat the Big Two in many areas, particularly in handling bit maps. It will be the only program to provide a truly usable hybrid vector and bit map environment. We look forward to testing the final release in a production environment.

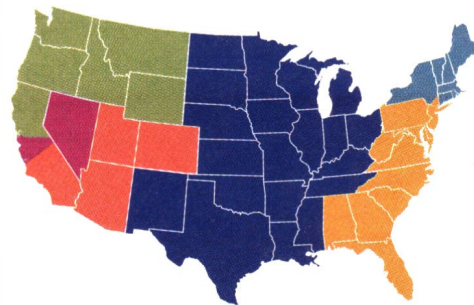
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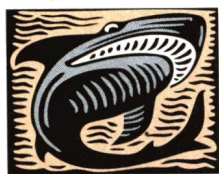
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A man and his secrets

In light of recent events at 1600 Pennsylvania Ave., the Knife finds himself in the unenviable position of having to nip certain malign rumors in the bud. Thanks to the overzealousness of one of his myriad administrative assistants, the Knife this week has come into possession

of certain incriminating dossiers bearing the FBI's distinctive imprimatur. These files detail the recent activities of several well-known hotbeds of piquant Mac news.

Tortuous ethical question: Would the Knife even *contemplate* using private citizens' confidential records to advance

his own craven political aspirations?

Simple Machiavellian answer: In a Netscape minute!

Beast with two backs

Breaking the seal on the first file folder before him, the Knife caught a whiff of brim-

stone and for a moment seemed to hear the hellish wails of a thousand doomed souls. Surprisingly, the contents did not include details on J. Edgar Hoover's current digs but instead described the latest Mac moves by those clever devils at IBM Microelectronics.

Like the altogether fabulous Mr. Hoover, the Knife cleaves to a rather puritanical moral code, a code that does not gladly suffer tiny red nipples on shiny black laptops. To the Knife's way of thinking, it's bad enough that IBM promulgates this kind of behavior within its own ThinkPad line without attempting to subvert the moral fiber of Mac users.

Alas, in yet another object demonstration of the domino theory, the Knife's operatives report that Big Blue was spotted at last week's PC Expo attempting to lure upstanding corporate citizens into its hotel room. The bait? A ThinkPad running the Mac OS and Windows NT on a 100-MHz 603e trussed up with 16 Mbytes of RAM and assorted Apple ASICs. Not satisfied with *that* unnatural coupling, IBM reportedly has designs on yet another freakish hybrid: a 604-based Mac-only desktop machine strapped into a chassis that resembles an Aptiva and boasts many of that worthy's multimedia features. Look for IBM to open the kimono at Macworld Expo in August.

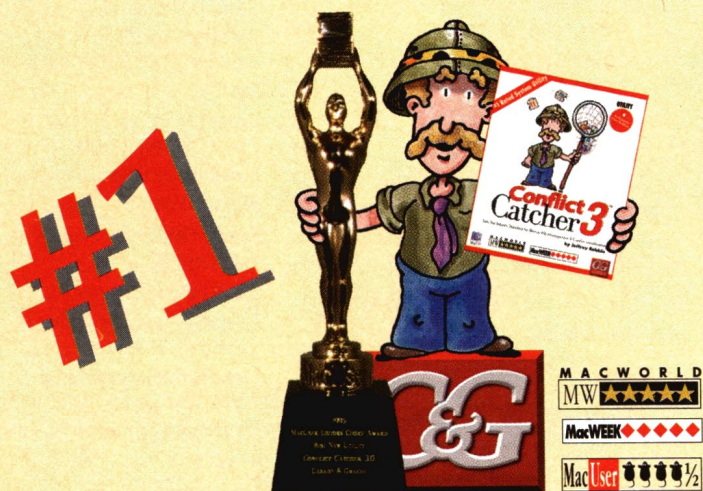
Tomorrow, the world

Turning with a shudder to the next dossier in the stack, the Knife quickly found himself hip-deep in the minutes of recent Adobe bund meetings. While some details remain cloudy, exposing these documents to ultraviolet light made Adobe's ruthless desire for world domination all too clear.

Within the walls of their Mountain View, Calif., compound, Warnock's warriors are preparing to greet the coming millennium head-on with revs to Photoshop, Illustrator and PageMaker. Marching lock step behind a unified interface, this software troika will attempt to shore up Adobe's eastern front against such intruders as CorelDraw for the Mac; QuarkXPress 4.0; and the Bureau of Alcohol, Tobacco and Firearms.

According to the Knife's moles, however, Adobe may be a tad short of ammo this go-round. Photoshop 4.0, which is due to go beta any minute now, seems like a glorified interim update, combining some interface tweaks with a few features that enhance work flow but don't add horsepower. In fact, Adobe software engineers are already hard at work on Photoshop 5.0, which will reportedly include many more Buck Rogers-style tools.

Meanwhile, the PageMaker team is apparently succumbing to siege mentality; instead of looking to Version 7.0, Adobe will attempt to fend off the next version of XPress with PageMaker 6.5, which will add a host of me-too features when it ships in the fall. Considering that XPress 4.0 is reportedly due out in the next month or so, Adobe's latest upgrade efforts seem about as convincing as the Freeman's bid for tax-exempt status. □



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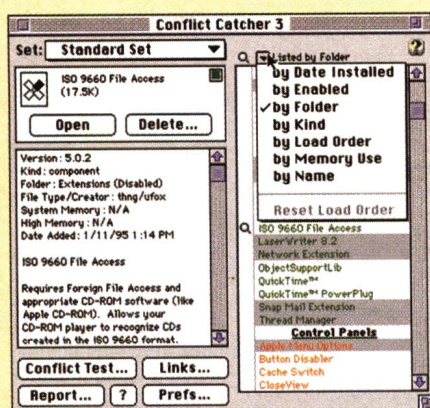
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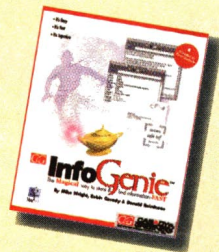
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